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Accession # 12-00000

Received : 08/10/2012
Completed: 08/14/2012
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USA

Results For:
DOE, JANE
Age/DOB: / Sex:Female
Dx Code: 255.41 255.42
Patient's Tel: 888-555-1234
Specimen Collected:08/05/2012

Test	Description	Result		Ref Values
ASI	**Adrenal Stress Index (Original)**			
TAP	**Free Cortisol Rhythm**			
	06:00 - 08:00 AM	14	Normal	13-24 nM
	11:00 - 1:00 PM	15	Elevated	5-10 nM
	04:00 - 05:00 PM	9	Elevated	3-8 nM
	10:00 - Midnight	11	Elevated	1-4 nM
	Cortisol Load:	49		***23 - 42 nM***

The cortisol load reflects the area under the cortisol curve. This is an indicator of overall cortisol exposure, where high values favor a catabolic state, and low values are sign of adrenal deterioration.

Figure 1. Circadian Cortisol Profile

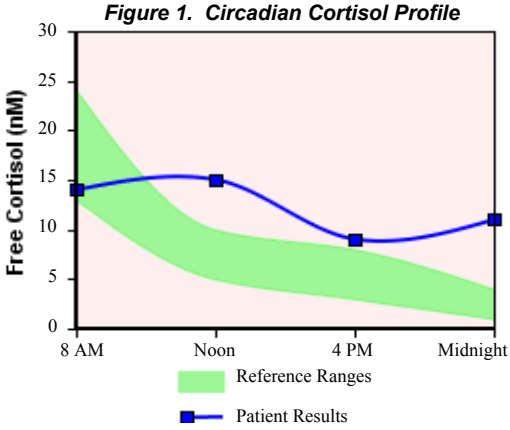


Figure 2.

The Cortisol release inducers fall into 4 broad categories shown in the adjacent flowchart. Long term adrenal axis maintenance and restoration, require optimization of all the cortisol inducers.

Remarks: An elevated morning/night free cortisol value may be associated with insomnia, and caused by a stress response to an emotional or mental situation, nocturnal hypoglycemia or chronic pain and overt/hidden inflammation.

What Next?

a) Consider appropriate dietary modifications and glycemic control that include an insulin friendly carbohydrate-to-protein balance.

b) Consider initiating a mild to moderate aerobic exercise program.

c) The literature reports ACTH pulse height is attenuated by use of Phosphorylated serine supplement within 1 - 2 hours of time(s) of high cortisol.

d) Consider the palliative use of a natural or pharmaceutical anti-histamine or anti-inflammatory.

e) Consider balancing the sympathetic/parasympathetic systems using established techniques, examples: meditation and Tai Chi or heart rate variability coherence (Freeze Framing).

f) If above changes do not yield the desired clinical and follow up test results, look for low grade or hidden inflammation and infections. Examples food intolerances, chronic gastrointestinal and other infections.

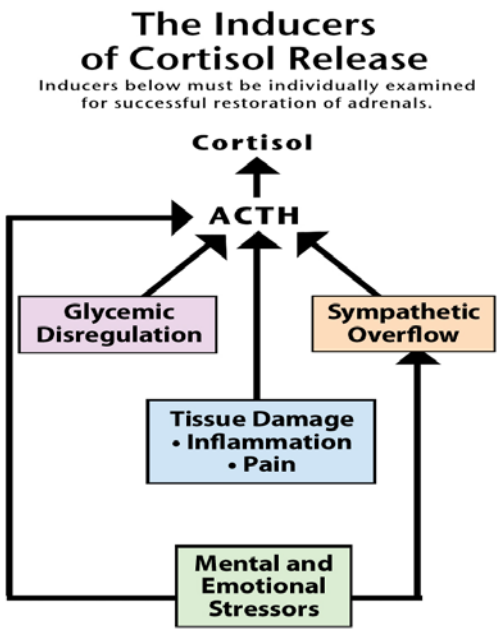


Figure 2.

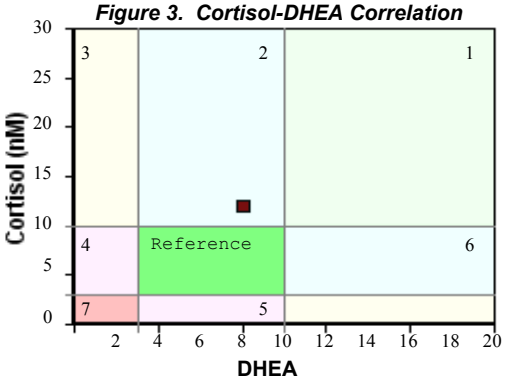
Test	Description	Result		Ref Values
DHEA	**Dehydroepiandrosterone Free**	**[DHEA + DHEA-S]**		
	Pooled Value	8	Normal	Adults (M/F): 3-10 ng/ml

Figure 3 **shows your cortisol-DHEA correlation was in:**

Zone 2 - Adapted with DHEA slump

This zone represents an elevated cortisol stress response coupled with a normal DHEA level. The lack of DHEA elevation is due to a stress-induced diversion of its steroid precursor (Pregnenolone) towards cortisol production. This relative DHEA deficit is pro-catabolic, and without restorative measures, will become an overt DHEA deficiency.

Figure 3. Cortisol-DHEA Correlation



CORTISOL-DHEA CORRELATION SPECTRUM

1. Adapted to stress.
2. **Adapted with DHEA slump.**
3. Maladapted Phase I.
4. Maladapted Phase II.
5. Non-adapted, Low Reserves
6. High DHEA.
7. Adrenal Fatigue.

ISN	**Insulin**			
	Fasting	<3		Normal: 3-12 uIU/mL
	Non-Fasting	<3	Depressed	Optimal: 5-20 uIU/mL

Depressed Non Fasting insulin within four hours after meal. This may be caused by a small carbohydrate load in the preceding challenge meal or a reduction in pancreatic insulin release or synthesis. Consider a closer examination of challenge meal composition to rule out pre-diabetic tendencies.

Why Test for Insulin?
Insulin activity is affected by the stress and cortisol responses. Chronic stress with cortisol elevation antagonizes insulin, and may cause functional insulin resistance. Furthermore, chronic hypercortisol causes hyperinsulin responses to carbohydrate intake. Chronic insulin resistance and overproduction lead to pancreatic exhaustion.

Basic facts about insulin values.

Fasting: This insulin value is elevated in cases of insulin resistance.

Non Fasting: This insulin value varies with type of meal and time of sample collection. See figure 4b. Adapted, Br. J. Nutr. 2003, 90:853
For an after meal insulin, instruct patient to eat 50g of carbohydrate or what is equivalent to 200 calories about 45-90 minutes before noon sample collection. Examples: 2 slices of white bread and 1 cup of orange juice OR 1 cup of cooked oatmeal and 1 cup of orange juice OR 2 ounces of corn flakes snack.

Figure 4a. Insulin Levels

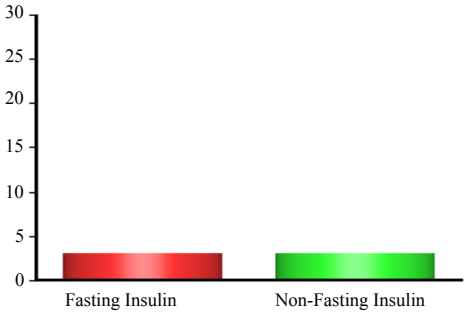
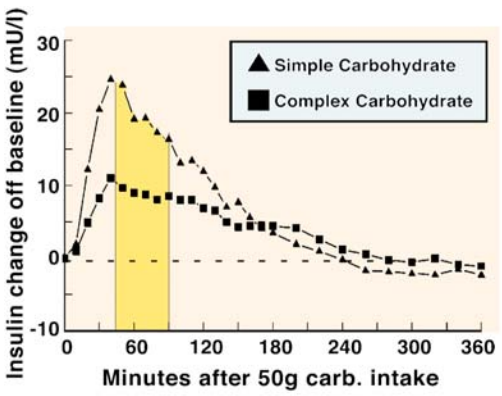


Figure 4b. Serum Insulin - Time Curve



Shaded area is optimal period of post-prandial collection.

Test	Description	Result		Ref Values
P17-OH	**17-OH Progesterone**	12	Depressed	Adults Optimal: 22-100 pg/ml Borderline: 101-130 pg/ml Elevated: >130 pg/ml

Figure 5. Adrenal Steroid Synthesis Pathway

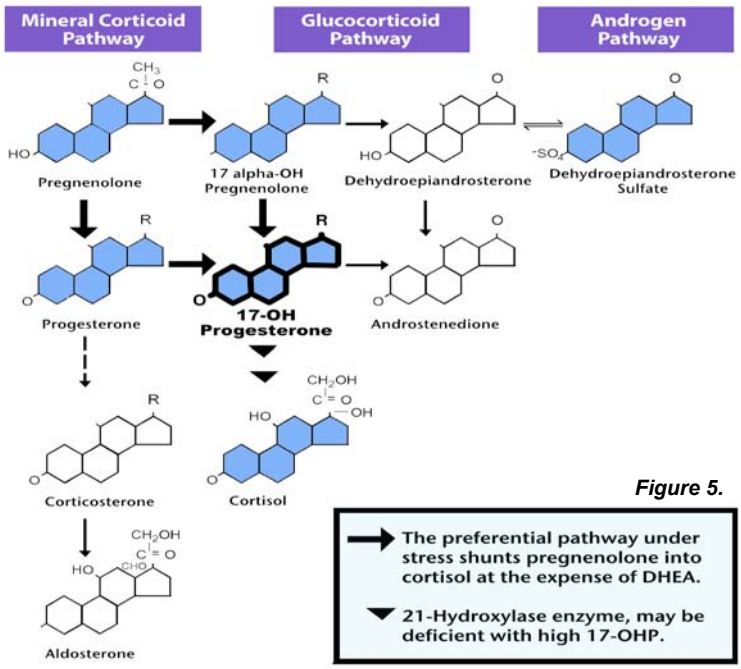


Figure 5.

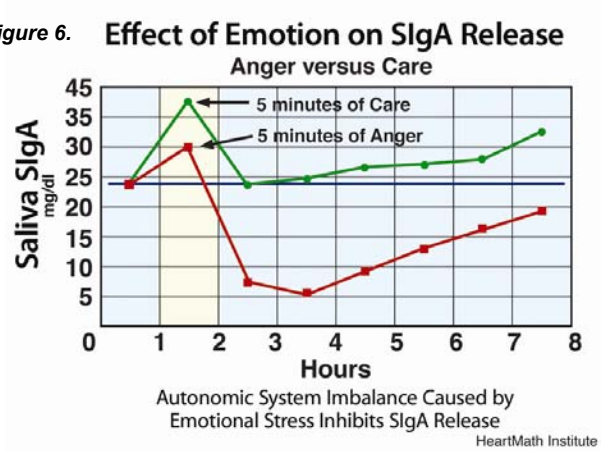
MB2S	**Total Salivary SIgA**	9	Depressed	Normal: 25-60 mg/dl Borderline: 20-25 mg/dl

A depressed mucosal SIgA may be attributed to one or more of the following reasons:
1- Excessive chronic cortisol output causes reduction in SIgA production due to low counts of SIgA immunocytes. Appropriate restorative treatments have been shown to produce incremental improvements in SIgA.
2- A short imbalance in sympathetic to parasympathetic activity rapidly inhibits SIgA release from the mucosal immunocytes for several hours.
3- Chronic deficits in cortisol and/or DHEA levels.
4- Possible systemic deficit in capacity to produce IgA - an inherited problem. Rule out possibility with a serum IgA test. A normal finding rules out this possibility.

Basic Facts About SIgA

1. Secretory IgA (SIgA) is secreted by the various mucosal surfaces. It is mostly a dimeric molecule. Less than 2% of Saliva is of serum origin. The secretory component of SIgA stabilizes it against enzymatic and bacterial degradation.
2. The main functions of SIgA include Immune Exclusion, Viral and Toxin Neutralization, Plasmid Elimination, and Inhibition of Bacterial Colonization. SIgA immune complexes are not inflamatory to the mucosal surfaces.

Figure 6.



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Accession: **12-00000** Continue Results For: DOE, JANE

Test	Description	Result		Ref Values
FI4	**Gliadin Ab, SIgA (Saliva)**	2	Negative	Borderline: 13-15 U/ml Positive: >15 U/ml ***Notes on Gliadin Ab Test*** Gliadins are polypeptides found in wheat, rye, oat, barley, and other grain glutens, and are toxic to the intestinal mucosa in susceptible individuals. Healthy adults and children may have a positive antigliadin test because of subclinical gliadin intolerance. Some of their symptoms include mild enteritis, occasional loose stools, fat intolerance, marginal vitamin and mineral status, fatigue, or accelerated osteoporosis. Scan. J. Gastroenterol. 29:248(1994).

REMARKS :
SAMPLE SHELF-LIFE AND STABILITY ARE DETERMINED BY STORAGE TEMPERATURE AND DURATION. TO FACTOR IN SHELF-LIFE EFFECTS ON RESULTS, THE CLINICIAN SHOULD REVIEW PERTINENT INFORMATION REGARDING SAMPLE COLLECTION AND STORAGE WITH THE PATIENT FOR THIS TEST.

COURTESY INTERPRETATION of test and technical support are available upon request, to Physicians Only