Diagnos-Techs, Inc.

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Accession #

Received : 09/03/2010
Completed: 09/09/2010
Reported : 09/13/2010

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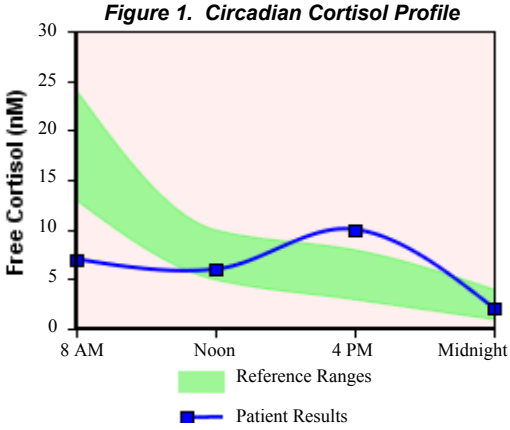
Results For:

Age:56 Dx Code:Not Provided
Sex:Female
Patient's Tel:
Specimen Collected:08/31/2010

Test	Description	Result		Ref Values
ASI	**Adrenal Stress Index**			
TAP				
	Free Cortisol Rhythm			
	06:00 - 08:00 AM	7	Depressed	13-24 nM
	11:00 - Noon	6	Normal	5-10 nM
	04:00 - 05:00 PM	10	Elevated	3-8 nM
	10:00 - Midnight	2	Normal	1-4 nM
	Cortisol Load:	25		***23 - 42 nM***

Figure 1. Circadian Cortisol Profile



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 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: Depressed morning cortisol, < 13 nM, is suggestive of marginal HPA (Hypothalamic-Pituitary-Adrenal) performance. Normal rhythms exhibit highest cortisol value for the day at 7 - 8 AM.
An elevated noon/afternoon free cortisol value is caused by a stress response to an emotional or mental situation, 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.

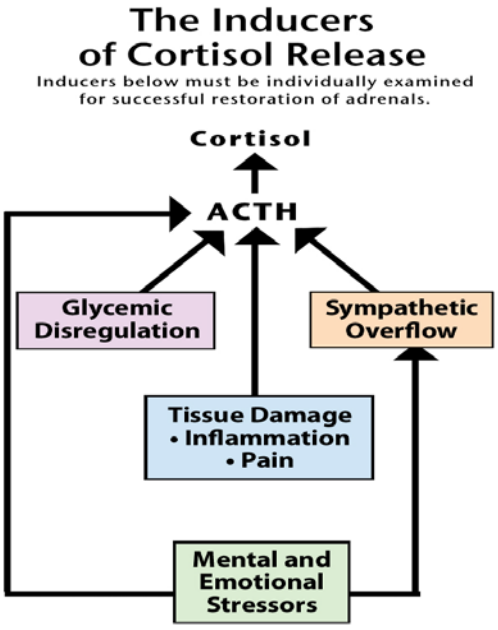


Figure 2.

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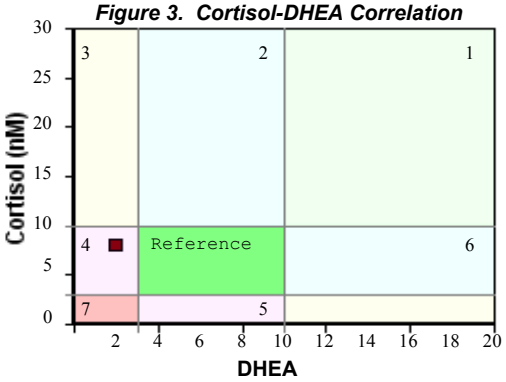
Test	Description	Result		Ref Values
DHEA	**Dehydroepiandrosterone**			
	Pooled Value	2	Depressed	Adults (M/F): 3-10 ng/ml

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

Zone 4 - Maladapted phase II

This zone represents a marginal cortisol output with reduced DHEA levels reflecting a limited adrenal response. The utilization of the precursor pregnenolone is usually limited and the adrenal cortex may show hypertrophic changes. Under stress most patients in maladaptation phase II will have a suboptimal response to stress. This suboptimal response is any response not consistent with a normal diurnal cortisol production pattern. This condition is usually the outcome of chronic and protracted stress exposure.

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	7	Normal	Normal: 3-12 uIU/mL
	Non-Fasting	18	Normal	Optimal: 5-20 uIU/mL

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

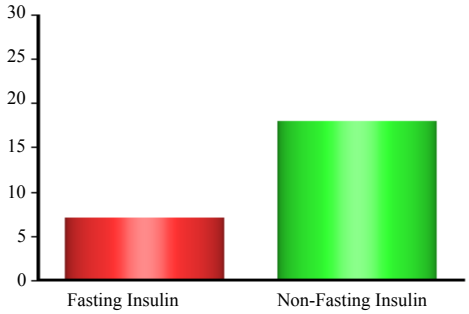
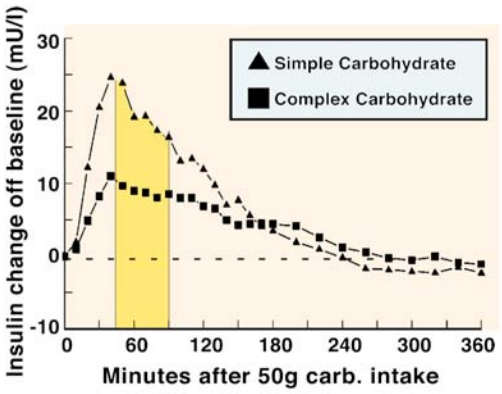


Figure 4b. Serum Insulin - Time Curve



Shaded area is optimal period of post-prandial collection.

Test	Description	Result		Ref Values
P17-OH	**17-OH Progesterone**	<15	Depressed	Adults Optimal: 22-100 pg/ml Borderline: 101-130 pg/ml Elevated: >130 pg/ml

Figure 5. Adrenal Steroid Synthesis Pathway

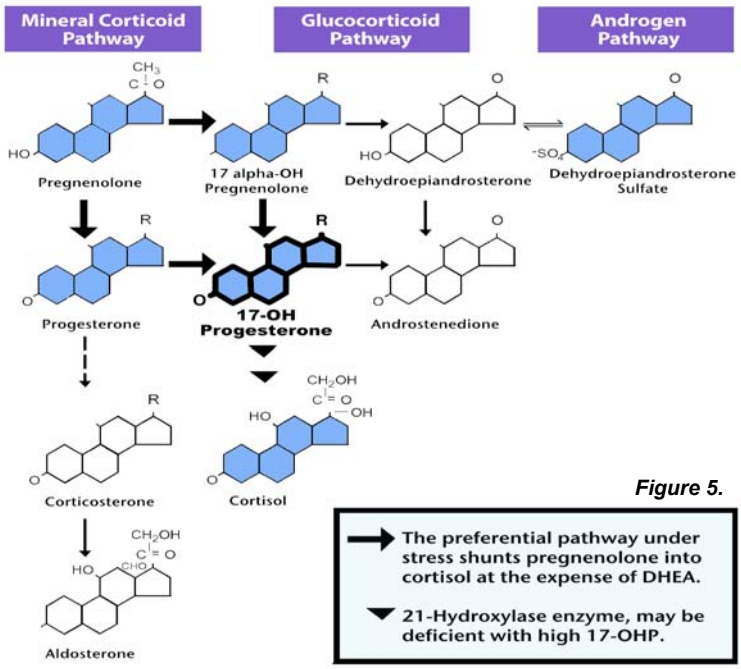


Figure 5.

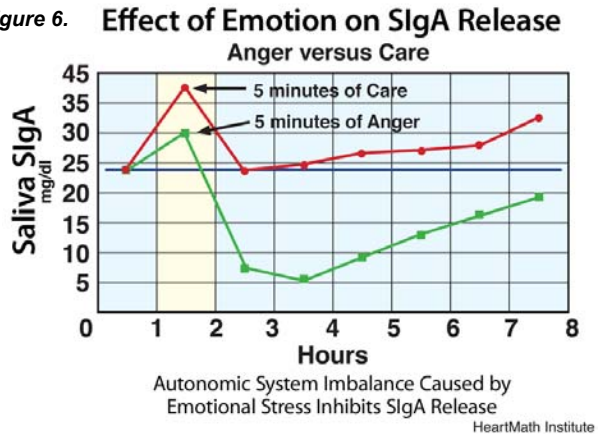
MB2S	**Total Salivary SIgA**	<5	Depressed	Normal: 25-60 mg/dl Borderline: 20-25 mg/dl

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: Continue Results For:

Test	Description	Result		Ref Values
FI4	**Gliadin Ab, SIgA (Saliva)**	1	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).

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