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Accession #

<TOCOMPANY: BIO-CENTER LABORATORY>

Received : 12/22/2010
 Completed: 12/29/2010
 Reported : 12/29/2010

BIO-CENTER LABORATORY

Results For:

JONATHAN BARNETT

Age: 54 Sex: Male Dx Code: 042. 351.0

WICHITA KS 67219

Patient's Tel: 816-442-8570

Specimen Collected: 12/18/2010

Test	Description	Result	Ref Values
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ASI Adrenal Stress Index

TAP Free Cortisol Rhythm

06:00 - 08:00 AM	19	Normal	13-24 nM
11:00 - 1:00 PM	5	Normal	5-10 nM
04:00 - 05:00 PM	3	Normal	3-8 nM
10:00 - Midnight	4	Normal	1-4 nM

Cortisol Load: 31 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.

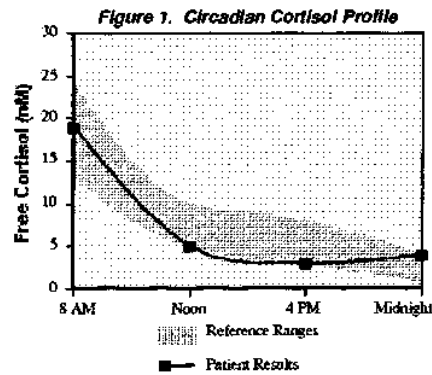


Figure 2.

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.

The Inducers of Cortisol Release
 Inducers below must be individually examined for successful restoration of adrenals.

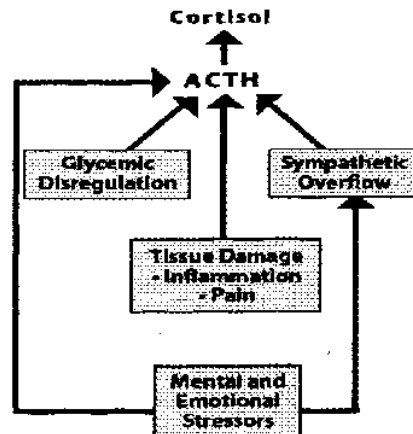


Figure 2.

C# 018283

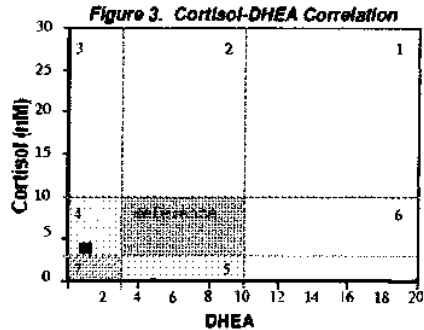
Test	Description	Result	Ref Values
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DHEA Dehydroepiandrosterone
 Pooled Value 1 Depressed Adults (M/F): 3-10 ng/ml

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.



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.

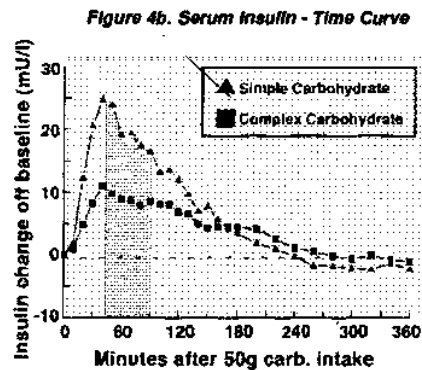
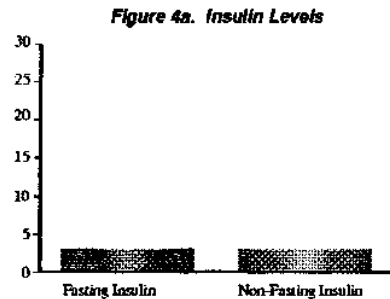
Why Test for Insulin?

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.



Shaded area is optimal period of post-prandial collection.

Test	Description	Result	Ref Values
P17-OH	17-OH Progesterone	22	Normal

Adults
 Optimal: 22-100 pg/ml
 Borderline: 101-130 pg/ml
 Elevated: >130 pg/ml

Figure 5. Adrenal Steroid Synthesis Pathway

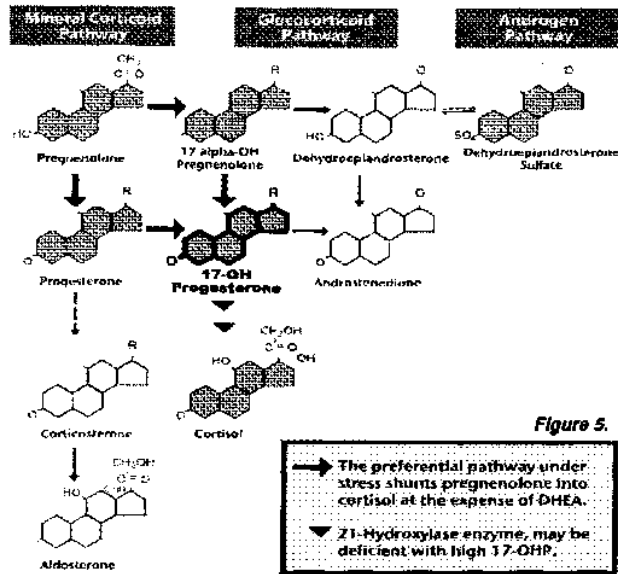


Figure 5.

MB2S Total Salivary SIgA <5 Depressed

Normal: 25-60 mg/dl
 Borderline: 20-25 mg/dl

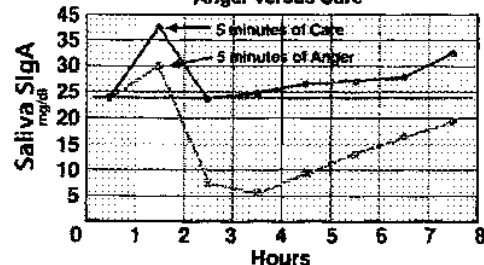
Basic Facts About SIgA

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.

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 inflammatory to the mucosal surfaces.

Figure 6. Effect of Emotion on SIgA Release
 Anger versus Care



Autonomic System Imbalance Caused by Emotional Stress Inhibits SIgA Release

Hebert/Smith Institute

Diagnos-Techs, Inc.

Accession:

Continue Results For: BARNETT, JONATHAN

Test	Description	Result	Ref Values
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FI4 Gliadin Ab, SIgA (Saliva) 13 Borderline

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).

Example of restoration Plan

All Examples of Restoration Plans are for Illustrative/Educational Purpose Only. Actual report data should be used within clinical context

Example- Cortisol Augmentation or Licorice Supplementation

Observed Cortisol Value(nM)	Intake Time	Typical Cortisol Dose	-OR-	Whole Licorice Extract Glycyrrhizic Acid Content
Morning Value	6-7AM	5mg 7.5mg 12.5mg	-OR-	10-15mg
10-13				
5-9				
less than 5	11AM-12PM	7.5mg	-OR-	5-10mg
Noon Value				
less than 4	3-4PM	5mg	-OR-	5-10mg
Afternoon Value				
less than 3				

*Do not use licorice in overtly hypertensive individuals. Do not exceed a total daily dose of 25-35mg of glycyrrhizic acid. Re-test by 8th week of use. Avoid use of licorice in pregnant women.

Test	Description	Result	Ref Values
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Example of DHEA Augmentation: Male

Weekly Protocol	Oral DHEA		OR Sublingual DHEA
	AM Dosage	PM Dosage	Daily Dosage
1st week	5mg	None	5mg <i>once</i> a day
2nd week	5mg	5mg	5mg <i>twice</i> a day
3rd week	10mg	5mg	
4th week	10mg	10mg	7mg <i>twice</i> a day
5th-12th week	15mg	10mg	
13th week	Retest DHEA		

Note: DHEA augmentation not applicable in cases of Testosterone & Estrogen associated diseases. Patient-specific treatments to be determined by healthcare providers.

To improve SIgA levels consider two aspects:

- 1) Reduction in suppression when applicable:
 - a. Optimize cortisol/DHEA balance
 - b. Balance sympathetic/parasympathetic activity
 - c. Rule out inherited IgA production deficit

- 2) Production Enhancement may include:
 - a. Exercise program
 - b. Vitamin E complex e.g. wheat germ oil
 - c. Botanical adaptogen supplementation

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