Adrenal Recovery
Diagnosis and Treatment of Adrenal Fatigue
Acknowledgements

• Andrew Heyman, University of Michigan
• Dr. James L. Wilson, Author of Adrenal Fatigue, The 21st Century Stress Syndrome
• Dr. Lena D. Edwards, researcher, lecturer and clinician
• Dr. Fernando Cortizo, AustralAsian Academy of Anti-Aging Medicine
Dr. Joe Esposito

- Certified Clinical Nutritionist
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- Diplomate of the American Board of Clinical Nutrition
- Fellow of the American Academy of Integrative Medicine

Disclosure

Affiliations:
- AlignLife Nutraceuticals
- AlignLife Franchise
- VitaLogics Software
We are STRESSED!
Why Manage Adrenal Fatigue?

An overwhelming portion of your patient base suffers from adrenal fatigue.

No one else is helping these people.

Diversify your practice for increased referrals / revenue.
Outline

1. Classic Patient Presentation
2. History of Hypoadrenia
3. Conventional Awareness of Hypoadrenia
4. The Anatomy of the Adrenal Gland
5. Physiology of Dysfunction
6. Functional Assessment
7. Patient Management
General Adaptation Syndrome

Hans Selye (1907-1982)

The sequence of physiological reactions to prolonged stress includes:

- Alarm
- Resistance
- Exhaustion
homeostasis

/ˌhōmēˈstāsēs/

noun

1. the tendency toward a relatively stable equilibrium between interdependent elements, esp. as maintained by physiological processes.
Organ Reserve

Thyroid gland

Parathyroid glands

Back view

Right adrenal gland

Left adrenal gland

Cortex

Medulla
What Are the Common Symptoms of Adrenal Fatigue
Are you easily overwhelmed by every day tasks that were once a breeze?
Do you get angry over things that never used to bother you?
Are you having weight gain around the middle?
Is your sleep not as regular or restful as it once was?
Is it difficult for you to concentrate on important tasks?
Do you crave foods that you know are unhealthy for you?
Are you catching more colds than before?
Is your libido not what it once was?
Are you easily irritated by friends family members?
Do you feel as if you have no energy by the middle of the afternoon?
Are you using coffee or soda to get through the day?
Are you drinking more alcohol to relieve stress?
Do aches and pains linger longer than they once did?
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It’s estimated that up to 80% of adult Americans suffer some level of adrenal fatigue at some time during their life.

p6. Adrenal Fatigue    James L. Wilson
Severe Hypoadrenia

• Called Addison’s Disease
• Acknowledged by Conventional Medicine
• Named after Sir Thomas Addison in 1855
• Can be life-threatening
• 70% cases are from auto-immune disease
  30% from severe stress or other causes
Adrenal Fatigue

- Less severe than Addison’s but often debilitating

- Also known as non-Addison’s hypoadrenia, sub-clinical hypoadrenia, neurasthenia and adrenal apathy.

- Not recognized as a distinct syndrome by conventional medicine

- Occurs when the amount of stress overextends the capacity of the body to compensate and recover from that stress or the combined stresses
Factors Affecting Adrenals

*Seen and Unseen Stresses*

- Lack of Relaxation
- Negative Attitudes and Beliefs
- Unwanted unemployment
- Fear
- Emotional Stress
- Psychological Stress
- Death of a loved one
- Wound Healing
- Prescriptions/non-prescription drugs
- Marital Stress
- Toxins
- Infection: Acute/Chronic
- Allergies
- Over Exertion
- Smoking
- Lack of Sleep (Staying up late though fatigued)
- Lack of, or excessive exercise
- Poor Eating Habits
- Sugar and White Flour Products
- Using Stimulants When Tired (Coffee / Caffeine)
Lifestyles Leading to Adrenal Fatigue

- College Student
- Single Parent
- Unhappy Marriage
- Stressful Work Conditions
- Self-employed with struggling business
- Drug or Alcohol Abuse
- All Work, Little Play
Stresses Add Up

The effects of stress are cumulative, even when the individual stressors are quite different.
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Conventional Approach

• Fatigue is a common complaint in many chronic diseases that adrenal hypofunction is not commonly a path a conventional practitioner will travel.

• Since Adrenal Fatigue is best managed naturally it is ignored and overlooked.

• Ignoring this condition creates chronic unnecessary health problems for millions of people.
Conventional Approach

• Adrenal Fatigue does not have an ICD-9 code and therefore doesn’t exist in medicine

• Politics of insurance companies, pharmaceutical industry and medical licensing board of their peers creates pressures that keep medical physicians from investigating conditions that don’t have a “code”
Results: 3

1. **Repeated mixing and isolation: Measuring chronic, intermittent stress in Holstein calves.**
   Wilcox CS, Schutz MM, Rostagno MR, Lay DC Jr, Eicher SD.
   PMID: 24054297 [PubMed - as supplied by publisher]
   Related citations

2. **Chapter 29: Unproved and controversial methods and theories in allergy-immunology.**
   Shah R, Greenberger PA.
   PMID: 22794702 [PubMed - indexed for MEDLINE]
   Related citations

3. **Nutrients and botanicals for treatment of stress: adrenal fatigue, neurotransmitter imbalance, anxiety and restless sleep.**
   Head KA, Kelly GS.
   Related citations
Nutrients and Botanicals for Treatment of Stress: Adrenal Fatigue, Neurotransmitter Imbalance, Anxiety, and Restless Sleep

Kathleen A. Head, ND, and Gregory S. Kelly, ND
However it is being maintained with minimal staffing due to the lapse in government funding. Information will be updated to the extent operational inquiries. For updates regarding government operating status see USA.gov.
Classic Patient Presentation
1. History of Hypoadrenia
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6. Patient Management
Anatomy of the Adrenal Glands

Two small glands that sit directly on top of each kidney.

Ad- Renal
Different Sections of Adrenal Gland

- **Capsule**
- **Zona Glomerulosa**
  - Mineralocorticoid
  - e.g. aldosterone
- **Zona Fasciculata**
  - Glucocorticoid
  - e.g. cortisol
- **Zona Reticularis**
  - Androgens
  - e.g. DHEA and androstenodione
- **Medulla**
  - Catecholamines
  - e.g. adrenaline
Steroid Synthesis: Chronic Stress

Cholesterol → Pregnenolone → Progesterone → Aldosterone

DHEA → Androstenedione → Estrone

Testosterone → Estradiol

Cortisol
Adrenal Medulla

Stimulated by sympathetic fibers

**Hormones:**
Epinephrine – Adrenaline
Norepinephrine – Noradrenalin

**Effects:**
- Dilate blood vessels
- Dilate bronchi
- Increase heart rate
- Increase strength of heart beat

“Fight or Flight”
Sympathetic Response

HP

A

HPA Access

Stress

Hypothalamus

Releasing hormone

Anterior pituitary

Blood vessel

ACTH

Adrenal cortex

Adrenal medulla

Spinal cord (cross section)

Nerve cell

Nerve cell

Epinephrine and norepinephrine

Mineralocorticoids

Glucocorticoids
Short-term stress response

1. Glycogen broken down to glucose; increased blood glucose
2. Increased blood pressure
3. Increased breathing rate
4. Increased metabolic rate
5. Change in blood-flow patterns, leading to increased alertness and decreased digestive and kidney activity

Long-term stress response

**Mineralocorticoids**
1. Retention of sodium ions and water by kidneys
2. Increased blood volume and blood pressure

**Glucocorticoids**
1. Proteins and fats broken down and converted to glucose, leading to increased blood glucose
2. Immune system may be suppressed
Outline

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Different Sections of Adrenal Gland

“The Cortex”

- **Capsule**
- **Zona Glomerulosa**: Mineralocorticoid e.g. aldosterone
- **Zona Fasciculata**: Glucocorticoid e.g. cortisol
- **Zona Reticularis**
- **Medulla**: Androgens e.g. DHEA and androstenodione
  - Catecholamines e.g. adrenaline
Steroid Synthesis: Chronic Stress

- Cholesterol
  - Pregnenolone
  - DHEA

- Progesterone
- Androstenedione
- Testosterone

- Aldosterone
- Estrone
- Estradiol

- Cortisol

AlignLife Nutraceuticals, LLC 2009
The Role of Aldosterone

The major hormone controlling sodium and potassium levels affecting fluid balance within the bloodstream, cells and interstitial fluid.

\[ \text{Aldosterone} \rightarrow \text{Kidneys Reserve Water / Sodium} \]

\[ \text{Aldosterone} \rightarrow \text{Kidneys Secret Water / Sodium} \]
Would An Increase in Water Fix the Fluid Imbalance?
Decreased Aldosterone  =  \text{↑} \text{↓} \text{Sodium in Interstitial Fluid}

Decreased Sodium in the Interstitial Fluid  =  \text{↑} \text{↓} \text{Water}

\textbf{Should the patient drink more water?}

What would high water intake do to sodium concentrate in the interstitial fluid?

If sodium levels are lowered what will happen with the sodium in the cell?
What Would Happen to the Blood Pressure of a Person with Decreased Blood Volume?
Sign of Adrenal Fatigue

• Lowered Aldosterone Levels Causes Orthostatic (Postural) Hypotension

Adrenal Functional Tests

**BLOOD PRESSURE TEST**
The pressure should raise 10-20mm Hg lying to standing and 4-10mm Hg sitting to standing. If it stays the same or drops it is a potential adrenal gland problem. If patient is not hydrated, repeat test after patient is hydrated.

Lying / Seated: ____________  Standing: ______________

**PUPIL TEST**
Sit in darkened room for 2 minutes then shine into the eye. Pupil should remain contracted for 2 minutes. If the pupil starts to alternate with dilation and contraction within 40-60 seconds it is a sign of hypoadrenia.

Length of time constricted:  R _____ seconds  L _____ seconds

**ROGOFF’S SIGN**
Tenderness at thoracolumbar junction  Yes ____  No ____

**SERGENT’S LINE**
Run the back of a ball point pen along the bare abdomen. Normally turns reddish-pink within 30 seconds. If hypoadrenia is present it will remain white for over a minute. Called Sargent’s White Line. Present approximately 40% of the time.

Positive ____  Negative ____
Different Sections of Adrenal Gland

- **Capsule**
- **Zona Glomerulosa**
  - Mineralocorticoid e.g. aldosterone
- **Zona Fasciculata**
  - Glucocorticoid e.g. cortisol
- **Zona Reticularis**
  - Androgens e.g. DHEA and androstenedione
- **Medulla**
  - Catecholamines e.g. adrenaline
Steroid Synthesis: Chronic Stress

- Cholesterol
  - Pregnenolone
  - DHEA
- Progesterone
- Androstenedione
- Testosterone
- Estradiol
- Estrone
- Aldosterone
- Cortisol
The adrenal gland provides the secretion of DHEA as well as testosterone, estrogen and progesterone.
Adrenal Gland Function in Women

Only source of DHEA and testosterone

After menopause, are the major source of estrogen & progesterone
Adrenal Gland Function in Men

Only source of DHEA, estrogen and progesterone

After andropause, are the major source of testosterone
The Adrenals Effect on Female Hormones

Since testosterone is a prime factor in sex drive why would Adrenal Fatigue cause a bigger impact in woman in regards to sex drive?

Hot flashes is caused by quickly dropping estrogen levels. How does Adrenal Fatigue play a crucial role in hot flashes?
Steroid Synthesis: Chronic Stress

Cholesterol → Pregnenolone → Progesterone → Aldosterone

DHEA → Androstenedione

Testosterone → Estradiol

Cortisol
Different Sections of Adrenal Gland

- Capsule
- Zona Glomerulosa → Mineralocorticoid e.g. aldosterone
- Zona Fasciculata → Glucocorticoid e.g. cortisol
- Zona Reticularis
  - Androgens e.g. DHEA and androstenodione
  - Catecholamines e.g. adrenaline
- Medulla
The Role of Cortisol

1. Metabolism of fats, protein and carbohydrates to maintain blood glucose

2. The main anti-inflammatory agent in your body

3. Keeps immune system in check by preventing a hyper immune response.

4. Has an affect on behavior, mood and electrical activity of neurons in the brain.
Normalizes Blood Sugar
(Keeps You From Crashing)

1. What hormone is secreted when your sugar levels increase in the bloodstream (soda / bread)?

2. How much insulin is secreted when the sugar load is excessive?

3. What happens to the sugar levels in the blood?

4. What does your body secrete to increase the blood sugar level?

5. What will happen to the adrenal gland if this process continues all day, every day?
Well My Diet is Perfect But I Have a Lot of Mental Stress?

Same Thing Happens As If You Have a High Sugar Diet.

Why?

Your body isn’t able to differentiate from getting chased by a tiger or getting frustrated when there is a line at the grocery store.

Secrets cortisol to increase blood sugar so you can run from a tiger (or just get more frustrated being in a long line)
What Happens to Cravings When Your Cortisol Levels Crash?

They Go Up!

What Do You Crave?

Sugar!

What Hormone Does that Increase?

Insulin!

Does that promote fat burning or fat deposition?

Fat deposition!
More Cravings
More Insulin
More Weight Gain
Increases Aromatase Enzyme
Increase Estrogen
Decreases Thyroid
More Fatigue
More Sugar for Fatigue
More Cravings
(Rinse and Repeat)
Anti-Inflammatory Effect
(Make booboos hurt less/makes breathing easier)

Cortisol keeps inflammation and swelling in check
- Insect bites
- Allergy (eyes / bronchial tubes)

Reduces inflammation classic to autoimmune diseases
(and will reduce the immune response CAUSING the swelling)

That is why Prednisone is used for auto-immune conditions.
Immune Modulation
(Keeps immune cells from getting paranoid)

When immune cells become hyper responsive they don’t differentiate antigens from normal tissue (good guys from the bad guys)

What type of diseases occur when the immune system is hypersensitive or paranoid.

Autoimmune Diseases

Cortisol reduces the rate at which lymphocytes multiply and accelerates their programmed cell death.
Immune Modulation

What Happens When Cortisol Crashes?

Immune System Upregulates (Th1)
Increases Inflammatory Cytokines (IL-6, TNF-alpha)
Activates microglial cells causing inflammation in the brain
Causes hippocampal degeneration/atrophy
Promotes autoimmune disease

One of the primary causes of fatigue with hypoadrenia
Cardiovascular Support
(Maintains blood pressure and strength of contraction)

It accomplishes this by helping aldosterone regulate sodium and potassium in the heart.

Helps maintain adequate pressure to pump blood to all areas of the body.
Cortisol effects your mood, behavior and memory.

High cortisol will actually cause atrophy of your hippocampus.
Steroid Synthesis: Chronic Stress

Cholesterol

Pregnenolone

Progestrone

Aldosterone

Cortisol

DHEA

Androstenedione

Estrone

Testosterone

Estradiol
Types of Stress

ENVIRONMENTAL
- Intense heat/cold
- Noise
- Toxic exposure
- Disrupted light cycles

MENTAL
- Fear/anxiety/worry
- Depression

PHYSIOLOGICAL
- Starvation
- Infection
- Poor sleep
- Excess exercise
- Pain
- Hypoglycemia
- Inflammation
Long-term Effects of Elevated Cortisol
(or elevated cortisol:DHEA ratio)

**Signs & Symptoms**
- Intermittent Fatigue
- Irritability
- Dysglycemia (hypoglycemic symptoms)
- Sleep disturbance
- Central obesity

**Immune Suppression**
- Secretory IgA
- Antigen penetration
- IgG
- NK cell activity
- IL-2
- Osteoporosis Risk
- Sex hormones
The Stress Hormone: Cortisol

• The Only Hormone that Increases With Age
• Can Elevate Blood Glucose by Up To 50%

— HOW?

• “Cortisol causes mobilization of amino acids from extrahepatic tissue, mainly from muscle. As a result, more amino acids become available in the plasma to enter into the gluconeogenesis pathway and promote the formation of glucose.”

*Guyton Textbook of Physiology p.846*
Catabolism

Recent studies in isolated tissue have demonstrated that cortisol depresses amino acid transport into muscle cells…"

Guyton Textbook of Physiology p.846
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How to Diagnosis

• Symptom Survey – Consultation

• Functional In-Office Testing
  – Blood Pressure Test
  – Pupil Dilation
  – Rogoff Sign

• Lab Testing
  – Salivary Cortisol (4)
  – DHEA
Symptom Survey

- Simple Questionnaire
- Saves Time in your office
- Helps The Doctor and the Patient Understand the Causation
Functional In-Office Testing

- Quick, Free Assessments
- Builds Patient Awareness
- Increases Patient Compliance
- Confirms Need For Testing
Functional In-Office Testing

PUPIL TEST

Patient will sit in a darkened room for 2 minutes. Then a light will be shined into the eye. The pupil should stay constricted for approximately 2 minutes. If within 40 seconds the pupil begins to alternate between dilation and constriction with dilation winning the battle, then it is a sign of hypoadrenia.

(Arroyo, CF. Jour. And Rac., Jan 2, 1924, cxix, pg. 25)
In order to maintain proper pressure in the bloodstream when going from sitting to standing the blood pressure should raise or at least maintain current pressure. More dramatically when going from lying to standing, the blood pressure should significantly increase (10-20mm Hg). If a positive test, make sure you are well hydrated and repeat the test. If it is positive when well hydrated, hypoadrenia is a likely diagnosis.

“Hypoadrenia usually spells hypotension.”

(Harrower, Henry R. Endocrine Diagnostic Charts. Harrower Laboratory, Inc. Glendale, California, 1929, pg 79)
Functional In-Office Testing

ROGOFF SIGN

Palpation or thumping of the thoracolumbar junction produces pain.
SERGENT’S WHITE LINES

Run the back of a ball point pen along the bare abdomen. Normally turns reddish-pink within 30 seconds. If hypoadrenia is present, it will remain white for over a minute. Called Sargent’s White Line. Present approximately 40% of the time.
Laboratory Testing

Salivary Testing

• Cortisol x4

• DHEA x1
Daily Cortisol Cycle
Advantage of Salivary Collection

• Non-invasive specimen collection
• Non-medical personnel (patient) can collect specimen
• Increase patient’s involvement with healthcare
• Cost-effective
Salivary Versus Serum

Graphic Representation of Linear Correlation Between Salivary & Serum Hormones

Salivary Cortisol Better Measure of Adrenal Cortical Function


**Salivary cortisol: a better measure of adrenal cortical function than serum cortisol.**

Vining RF, McGinley RA, Makartis JJ, Ho KY.

**Abstract**

Salivary cortisol concentration was found to be directly proportional to the serum unbound cortisol concentration both in normal men and women and in women with elevated cortisol-binding globulin (CBG). The correlation was excellent in dynamic tests of adrenal function (dexamethasone suppression, ACTH stimulation), in normals and patients with adrenal insufficiency, in tests of circadian variation and randomly collected samples. Women in the third trimester of pregnancy exhibited elevated salivary cortisol throughout the day. The relationship between salivary and serum total cortisol concentration was markedly non-linear with a more rapid increase in salivary concentration once the serum CBG was saturated. The equilibrium of cortisol between blood and saliva was very fast, being much less than 5 minutes. These data, combined with a simple, stress-free, non-invasive collection procedure, lead us to suggest that salivary cortisol is a more appropriate measure for the clinical assessment of adrenocortical function than is serum cortisol.

PMD: 6316831 [PubMed - indexed for MEDLINE]
Normal Values

- Hypoadrena
- Hyperadrenal
- Optimal Levels

Addison’s Disease
Cushing’s Disease

Adrenal Fatigue  Dr. James L. Wilson, p89
What If I Take Transdermal Hormone Replacement?

Salivary levels will raise above testing range for approximately two months. You can **NOT** use salivary testing while applying progesterone creams, etc.

Since transdermal hormones are transported via the skin to the lymph to all cells of the body (not the blood), a blood test will not show any change and is therefore also unreliable assessment.

Therefore, both salivary and blood testing will be unreliable in regards to monitoring the effects of therapy. You will need to use symptomatic response.
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Why Does Low Cortisol Cause Salt Cravings?
Is It Okay To Use Salt?

Recommend Powdered Kelp because it contains both sodium and potassium. Kelp also contains iodine which can assist the thyroid which is usually dysfunctional when you have adrenal dysfunction. You can add sea salt to the Kelp Powder as desired.
Vitamin C

The more cortisol secreted the more vitamin c is used is the cascade to create the hormone.

The highest concentration of Vitamin C is in the adrenal gland.

Necessary for both catecholamine synthesis and steroidogenesis.

Studies – 1,000mg 3x daily
Pantothenic Acid

Adrenal dysfunction with inadequate levels of B5

It will help regulate levels of cortisol that is secreted.

Minimum of 500mg 3x a day
Magnesium

Helps Insulin Sensitivity - More Sensitive Insulin Less Abuse of Cortisol

Perform Magnesium Calibration

Mg is a GABA antagonist which will promote growth hormone and melatonin. Melatonin helps create more sensitivity of the hypothalamus to cortisol helping the negative feedback mechanism to turn off cortisol secretion

Mg reduces nocturnal ACTH secretion which is why Mg helps people get better sleep
Relora® (Stress Relief™)

- Patented Formulation from California-based Next Pharmaceuticals
- Combination of magnolia and phellodendron
- Anti-anxiety and anti-stress properties similar to benzodiazepines, yet non-sedating
- Anti-depressant properties
- Normalize DHEA and cortisol levels
- Low side effect profile / Dosage: 1 capsule TID
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Stage of Adrenal Damage

• Stage 1 - Normal Adaptation to Stress
  “Stressed and Wired”

• Stage 2 – Adrenal Fatigue
  “Stressed and Tired”

• Stage 3 – Adrenal Exhaustion
  “Tired Than Wired”
Stage 1 - Normal Adaptation to Stress

*Stressed and Wired*

- Both Cortisol and DHEA Increase with stress
- Usually Asymptomatic

**Need Adrenal Balance Program**
Adrenal Balance

• Adaptagenic Adrenal Support
  Stress Relief (1 QD)
  (Rhodiola, Relora, Ashwagandha)

• Vitamin C
  Active-C (1 BID)

• Glycemic Regulation
  Sugar Balance (1 TID)

(All Programs Must Have Patient on a Pharmaceutical-Grade Multivitamin with sufficient B-Vitamin intake)
Stage 2 – Adrenal Fatigue
“Stressed and Tired”

- Cortisol Increases and DHEA declines
- Stressed, Anxiety Attacks, Mood Swings

Need Adrenal Boost Program
Adrenal Boost

- **Adaptogenic Adrenal Herbal Support**
  Stress Relief (2 QD)

- **Vitamin C**
  Active-C (1 BID)

- **Glycemic Regulation**
  Sugar Balance (1 TID)

- **Pregnenolone** (2 QD)
Stage 3 – Adrenal Exhaustion

“Tired Than Wired”

• Both Cortisol and DHEA are low

• Depression and Exhaustion

Need Adrenal Restoration Program
Steroid Synthesis: Chronic Stress

1. Cholesterol → Pregnenolone
2. Pregnenolone → Progesterone
3. Progesterone → Aldosterone
4. Progesterone → DHEA
5. DHEA → Androstenedione
6. Androstenedione → Estrone
7. Androstenedione → Testosterone
8. Testosterone → Estradiol
Adrenal Restoration

- **Adaptagenic Adrenal Herbal Support**
  Stress Relief (2 QD)

- **Vitamin C**
  Active-C (1 BID)

- **Glycemic Regulation**
  Sugar Balance (1 TID)

- **Pregnenolone** (2 QD)

- **Adrenal Glandular**
  Adrenal Restore (2QD)

- **Herbal Sleep Support**
  Sleep Aid (2QD)
The Lifestyle Components

• Balance Blood Sugar
  – Increase Fiber & Protein
  – Reduce Sugar/Carb

• Eliminate Stimulants

• Increase Exercise

• Relaxation Techniques
  – Abdominal Breathing
  – Progressive Relaxation
  – Meditation

• Increase Quality Sleep
Mental Exercises

• Good For Me / Bad For Me
• Energy Robbers (actions, people, things)
• Adapt to Situations (Change/Adapt/Leave)
Your Adrenal Report

The adrenal gland is a small triangular-shaped tissue above each of your kidneys. It is responsible for many vital body functions including sodium balance, sugar regulation, stress management, weight management, sex hormone creation and many other functions.

If your adrenal gland is damaged it will take approximately four to six months to regulate the gland using very specific nutritional formulations, dietary changes and lifestyle enhancements. It is very important that you follow all recommendations because the nutrients alone without dietary changes and lifestyle enhancements will not create the healing necessary to repair your gland.
The test you completed (attached) provided the following information about your adrenal gland:

- **Within Normal Limits:** Your adrenal gland is working within normal limits.
  - **Nutrient Program:** Begin or continue taking the Foundation-W program to maintain your health.
  - **Other:**

- **Adrenal Stress:** Your adrenal gland is under excess stress and beginning to show signs of compromise.
  - **Nutrient Program:** Adrenal Balance Program for [ ] months.
    - Take [ ] capsule(s) of DHEA first thing in the morning.
    - **Other:**

- **Adrenal Fatigue:** Your adrenal gland is under extreme stress and has lost its ability to adapt to stress.
  - **Nutrient Program:** Adrenal Boost Program for [ ] months.
    - Take [ ] capsule(s) of DHEA first thing in the morning.
    - **Other:**

- **Adrenal Exhaustion:** Your adrenal gland is compromised and unable to adapt to stress.
  - **Nutrient Program:** Adrenal Restoration Program for [ ] months.
    - Take [ ] capsule(s) of DHEA first thing in the morning.
    - **Other:**

[AlignLife Logo]
## Adrenal Program Details

### Adrenal Balance
- Stress Relief (2 caps AM / 1 cap PM)
- Active-C Tabs (1 tab 3x daily)
- Sugar Balance (1 cap 3x daily w/meals)

### Adrenal Restoration
- Stress Relief (2 caps AM / 1 cap PM)
- Pregnenolone (3 caps in the AM)
- Adrenal Restore (2 caps in the AM)
- Active-C Tabs (1 tab 3x daily)
- Sugar Balance (1 cap 3x daily w/meals)
- Sleep Aid (2 caps before bed)

### Adrenal Boost
- Stress Relief (2 caps AM / 1 cap PM)
- Pregnenolone (3 caps in the AM)
- Active-C Tabs (1 tab 3x daily)
- Sugar Balance (1 cap 3x daily w/meals)

### If DHEA is Deficient - (Add Additional $17)
- Men (2 caps in the AM)
- Woman (1 cap in the AM)
Dietary Enhancements

The following dietary changes are extremely important to embrace to assist in the healing of your adrenal gland.

- Eat 5 smaller meals a day. Don’t miss breakfast!
- Increase protein intake to a minimum of ⅔ to ¾ a gram per pound of body weight.
- Limit/Eliminate simple sugar intake (candies, cookies, ice cream)
- Limit breads/pastas/potato intake (high carb foods)
- Increase fiber from fruits and vegetables
- Eliminate consumption of soft drinks and drink primarily water

Lifestyle Enhancements

- Learn to respond to stress instead of reacting the stress
- Embrace stress reduction techniques such as yoga, meditation and deep breathing
- Begin cardiovascular exercise 4-5x weekly. Increase intensity each week over a 6 month period of time.
- Think positive. Be around positive individuals. Your attitude and behavior will have an affective on your stress and your adrenal function.
- OPTIONAL: Begin weight resistance exercises three times per week.

Follow Up Consultations

In the management of some condition it is important to continue consultations to assess how you are responding to your program and to continue to teach the implementation of dietary changes and lifestyle. Follow up consultations are also of benefit to improve compliance of the programs implemented. The following are the recommendation for follow up consultations

Follow up consultations at a frequency of ______

Retest

1. Test: ______ Date: ______ 2. Test: ______ Date: ______ 3. Test: ______ Date: ______
### Your Adrenal Balance Supplement Schedule

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Relief</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Active-C Tabs</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sugar Balance (with meals)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>DHEA (if needed)</td>
<td></td>
<td></td>
<td>Men 2 Women 1</td>
</tr>
</tbody>
</table>

### Your Adrenal Boost Supplement Schedule

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Relief</td>
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<td></td>
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<tr>
<td>Pregnenolone</td>
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<td></td>
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</tr>
<tr>
<td>Active-C Tabs</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sugar Balance (with meals)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>DHEA</td>
<td></td>
<td></td>
<td>Men 2 Women 1</td>
</tr>
</tbody>
</table>

### Your Adrenal Restoration Supplement Schedule

<table>
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<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Relief</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>Pregnenolone</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>Adrenal Restore</td>
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<td></td>
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</tr>
<tr>
<td>Active-C Tabs</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sugar Balance (with meals)</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sleep Aid</td>
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<tr>
<td>DHEA</td>
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<td>Men 2 Women 1</td>
</tr>
</tbody>
</table>
Interested in More Information?

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- Become one of 20 clinics we will focus on nutrition integration protocols

Contact AlignLife Nutraceuticals

- (309) 807-4439
- info@alignlifenuetrition.com