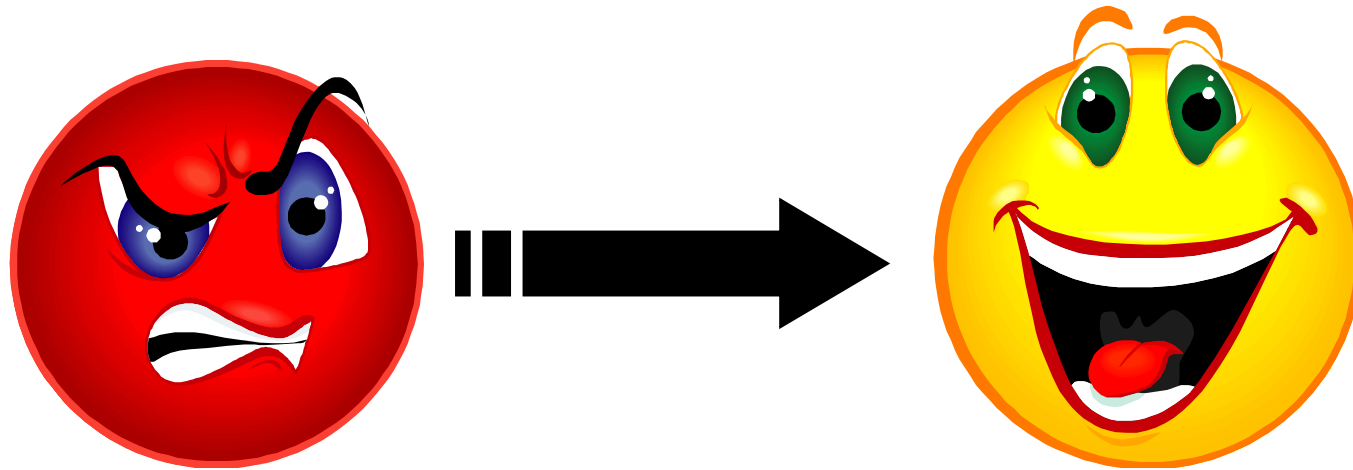




Adrenal Recovery

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
- Certified Nutrition Specialist
- Diplomate of the Gonstead System
- Board Certified Naturopathic Physician
- Diplomate of the College of Clinical Nutrition
- Diplomate of the American Board of Clinical Nutrition
- Fellow of the American Academy of Integrative Medicine

Disclosure

Affiliations:

AlignLife Nutraceuticals

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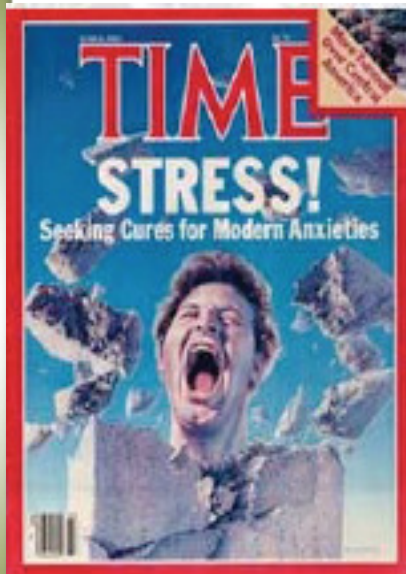




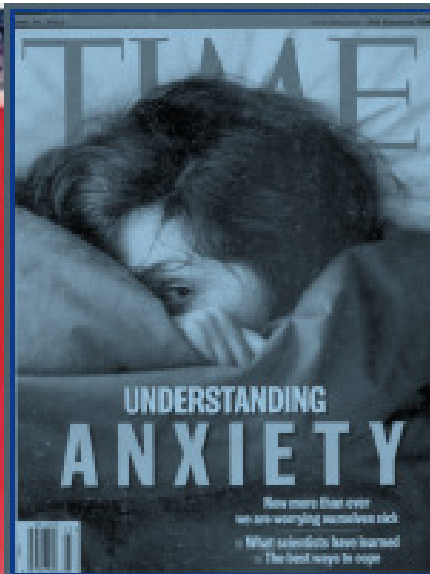




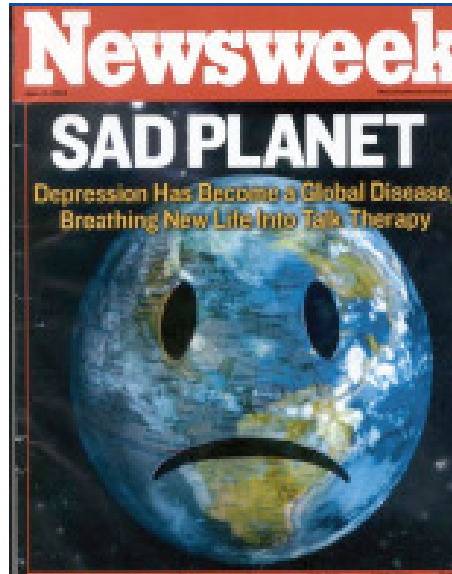
We are STRESSED!



1983



2002



2004



2005



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
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General Adaptation Syndrome

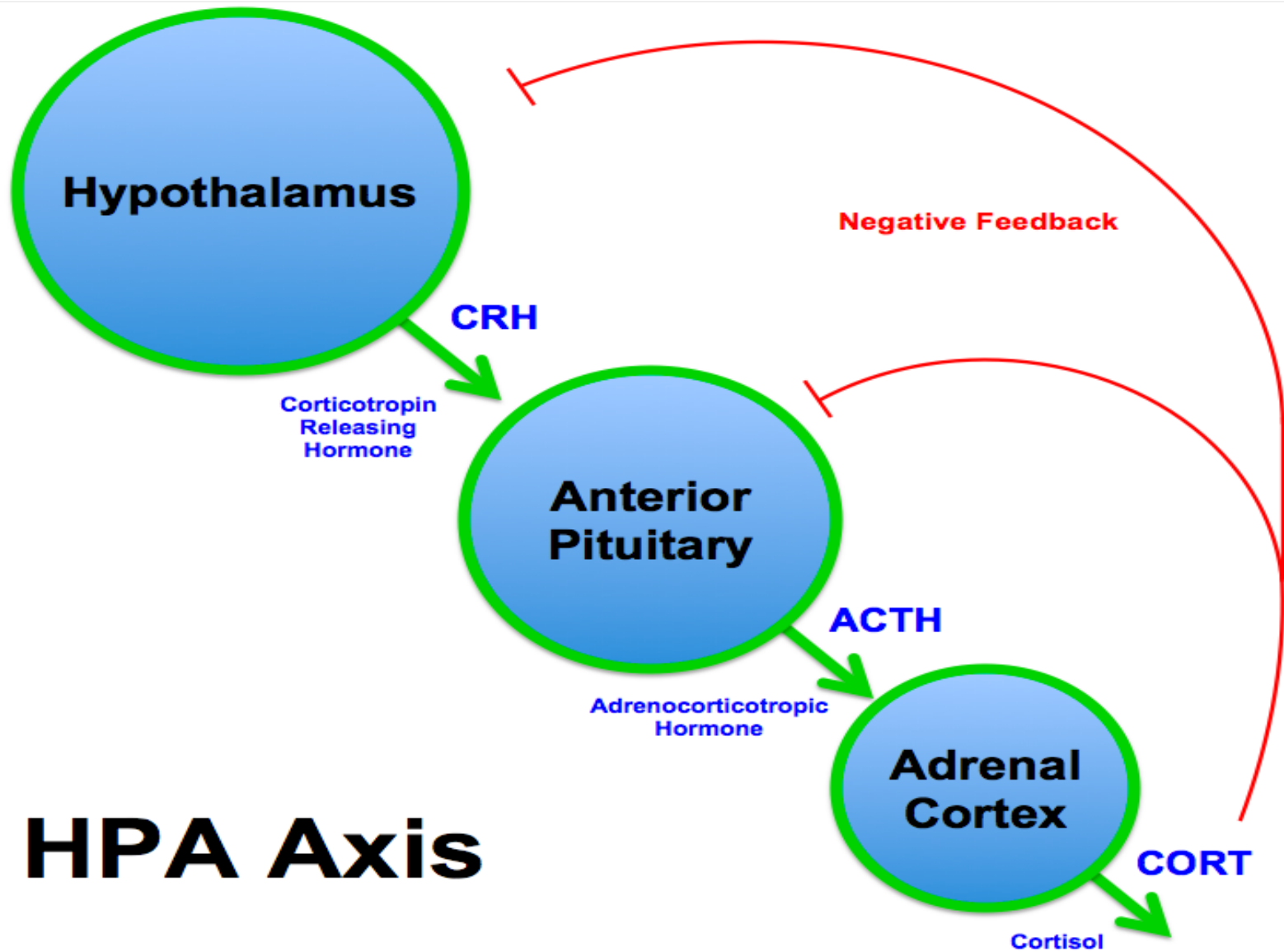
Hans Selye (1907-1982)

The sequence of physiological reactions to prolonged stress includes:

- Alarm
- Resistance
- Exhaustion



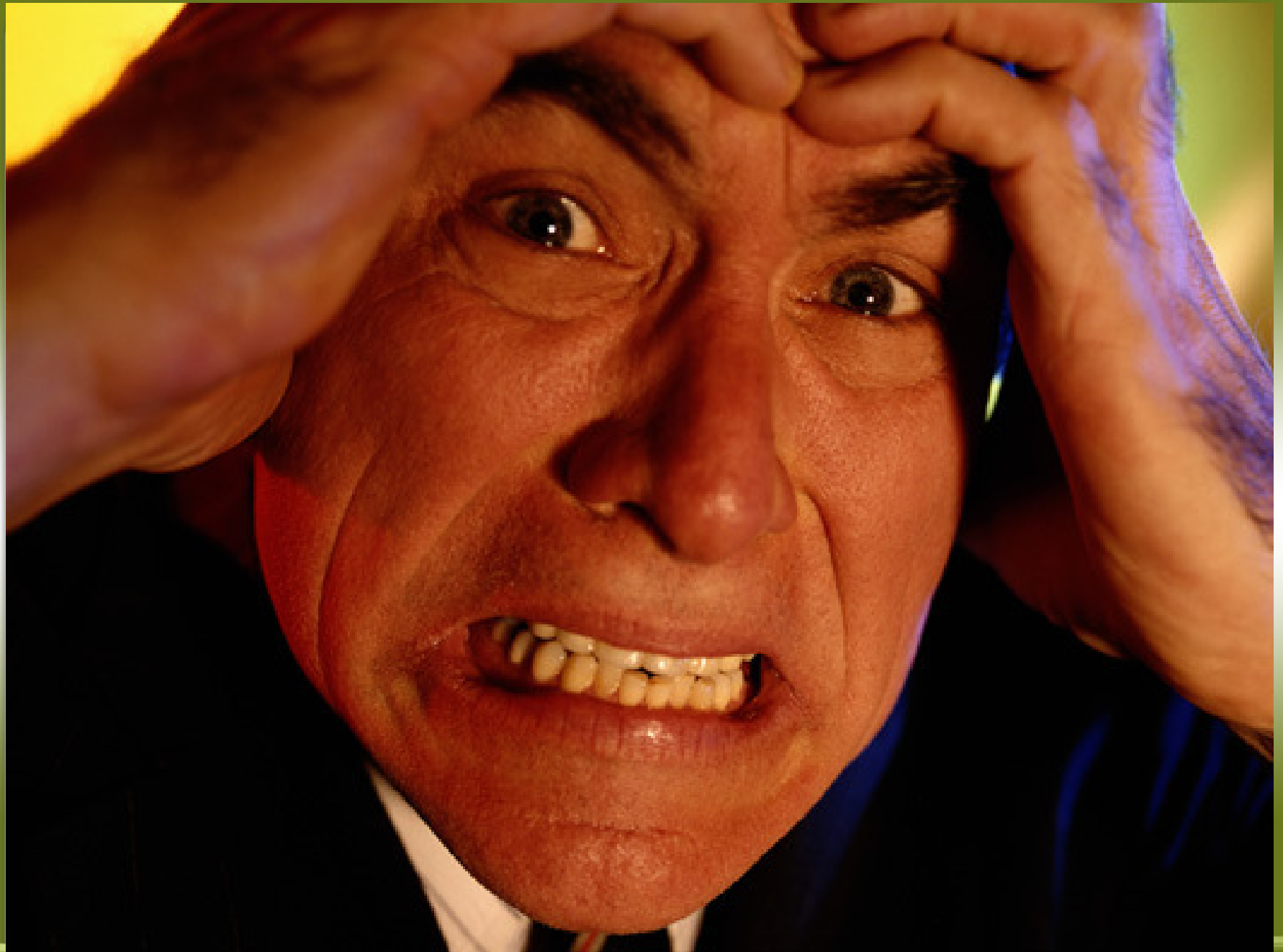
HPA Axis



HPA Axis









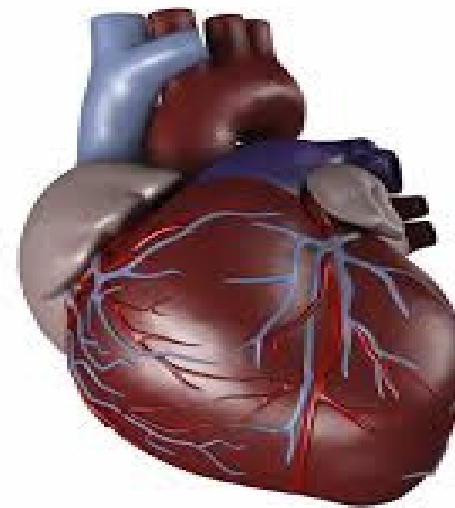
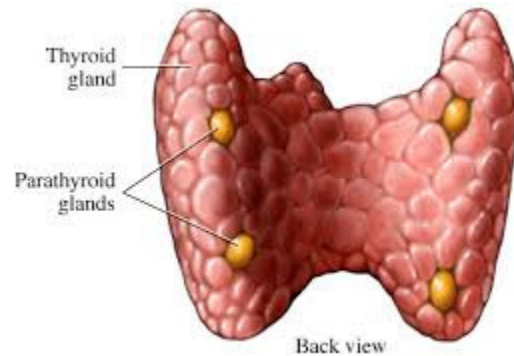
ho·me·o·sta·sis

/ˌhōmēəˈstāsis/ 

noun

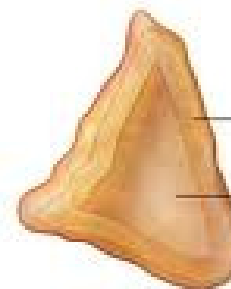
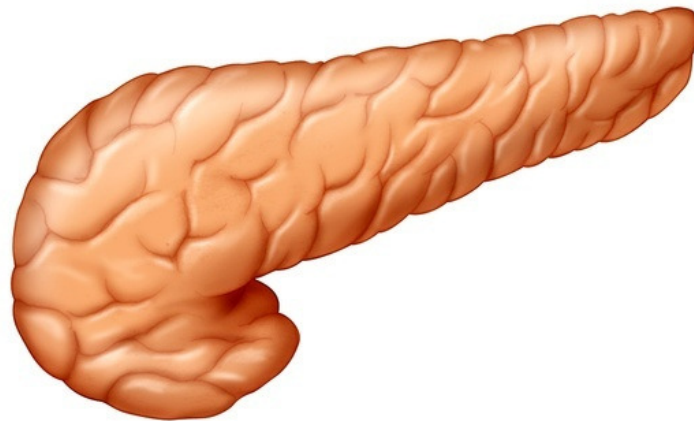
1. the tendency toward a relatively stable equilibrium between interdependent elements, esp. as maintained by physiological processes.

Organ Reserve



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?*



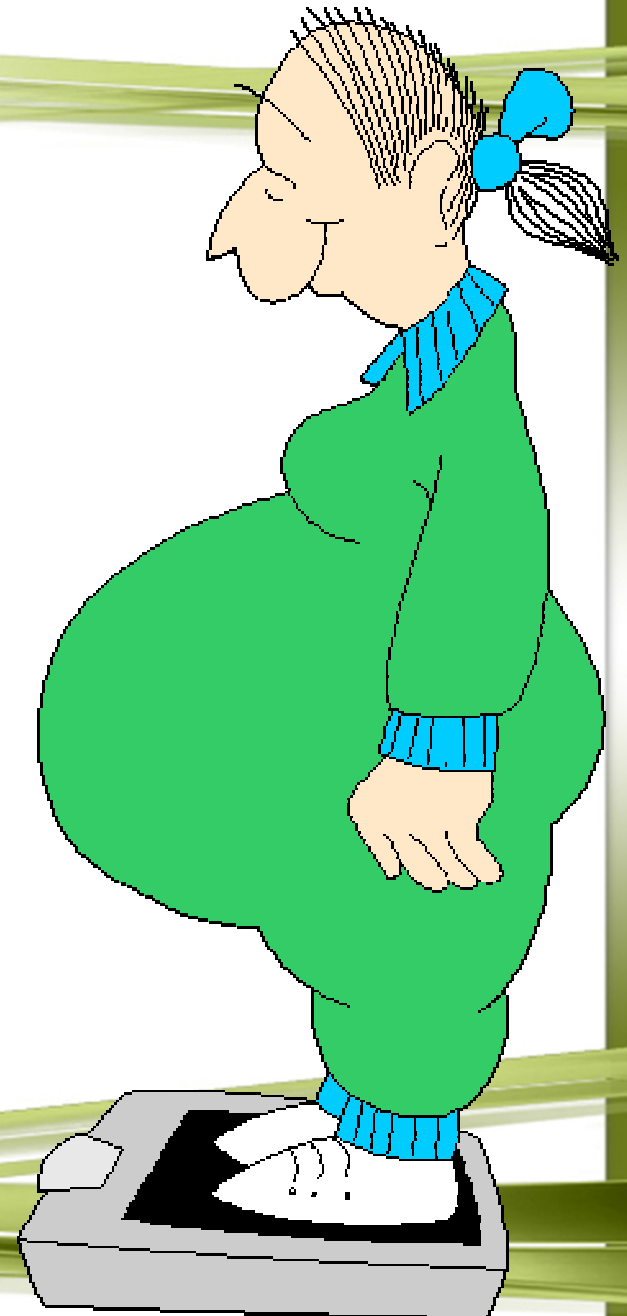


*Do you get angry
over things
that never used to
bother you?*





*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"

PubMed



"adrenal fatigue"



RSS

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ever it is being maintained with minimal staffing due to the lapse in government funding. Information will be updated to the ex
ational inquiries. For updates regarding government operating status see [USA.gov](#).

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- ☐ [Repeated mixing and isolation: Measuring chronic, intermittent stress in Holstein calves.](#)
 1. Wilcox CS, Schutz MM, Rostagno MR, Lay DC Jr, Eicher SD.
J Dairy Sci. 2013 Sep 18. doi:pii: S0022-0302(13)00649-8. 10.3168/jds.2013-6944. [Epub ahead of print]
PMID: 24054297 [PubMed - as supplied by publisher]
[Related citations](#)
- ☐ [Chapter 29: Unproved and controversial methods and theories in allergy-immunology.](#)
 2. Shah R, Greenberger PA.
Allergy Asthma Proc. 2012 May-Jun;33 Suppl 1:S100-2. doi: 10.2500/aap.2012.33.3562. Review.
PMID: 22794702 [PubMed - indexed for MEDLINE]
[Related citations](#)
- ☐ [Nutrients and botanicals for treatment of stress: **adrenal fatigue**, neurotransmitter imbalance, anxiety, and restless sleep.](#)
 3. Head KA, Kelly GS.
Altern Med Rev. 2009 Jun;14(2):114-40. Review.
PMID: 19594222 [PubMed - indexed for MEDLINE] **Free Article**
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Alternative Medicine Review Volume 14, Number 2 2009

Review Article

Nutrients and Botanicals for Treatment of Stress: Adrenal Fatigue, Neurotransmitter Imbalance, Anxiety, and Restless Sleep

Kathleen A. Head, ND, and Gregory S. Kelly, ND

or flight mechanism. Physiological changes associated

Alternative Medicine Review, Volume 14, Number 2, 2009



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](#).

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☐ [Cortisol and depression in pre-diagnosed and early stage Huntington's disease.](#)

1. Shirbin CA, Chua P, Churchyard A, Lowndes G, Hannan AJ, Pang TY, Chiu E, Stout JC. Psychoneuroendocrinology. 2013 Sep 26. doi:pii: S0306-4530(12)00355-1. 10.1016/j.psyneuen.2012.10.020. [Epub ahead of print]
PMID: 24074804 [PubMed - as supplied by publisher]
[Related citations](#)

☐ [Case 16-2013: A girl with irritability, hypersomnia, and somatic symptoms.](#)

2. van Vollenhoven RF. N Engl J Med. 2013 Sep 19;369(12):1174. doi: 10.1056/NEJMc1307922#SA2. No abstract available.
PMID: 24047076 [PubMed - indexed for MEDLINE]
[Related citations](#)

☐ [Case 16-2013: A girl with irritability, hypersomnia, and somatic symptoms.](#)

3. Shavit L, Lifschitz M, Slotki I. N Engl J Med. 2013 Sep 19;369(12):1173-4. doi: 10.1056/NEJMc1307922#SA1. No abstract available.
PMID: 24047075 [PubMed - indexed for MEDLINE]
[Related citations](#)

☐ [Case 16-2013: A girl with irritability, hypersomnia, and somatic symptoms.](#)

4. Bender SL, Pinsky E, Sherry NA. N Engl J Med. 2013 Sep 19;369(12):1174. doi: 10.1056/NEJMc1307922. No abstract available.
PMID: 24047074 [PubMed - indexed for MEDLINE] **Free Article**
[Related citations](#)

Outline

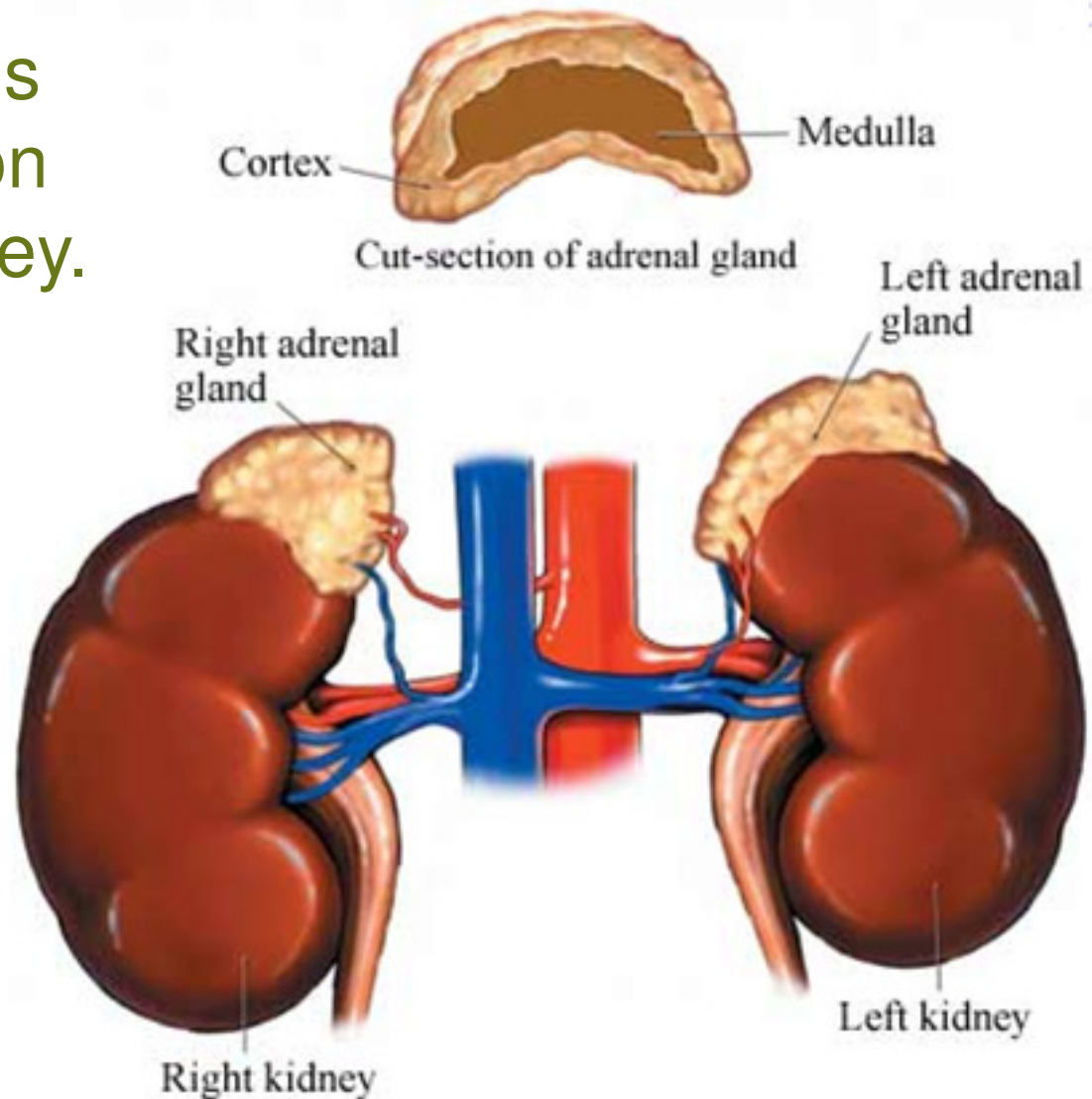
Classic Patient Presentation

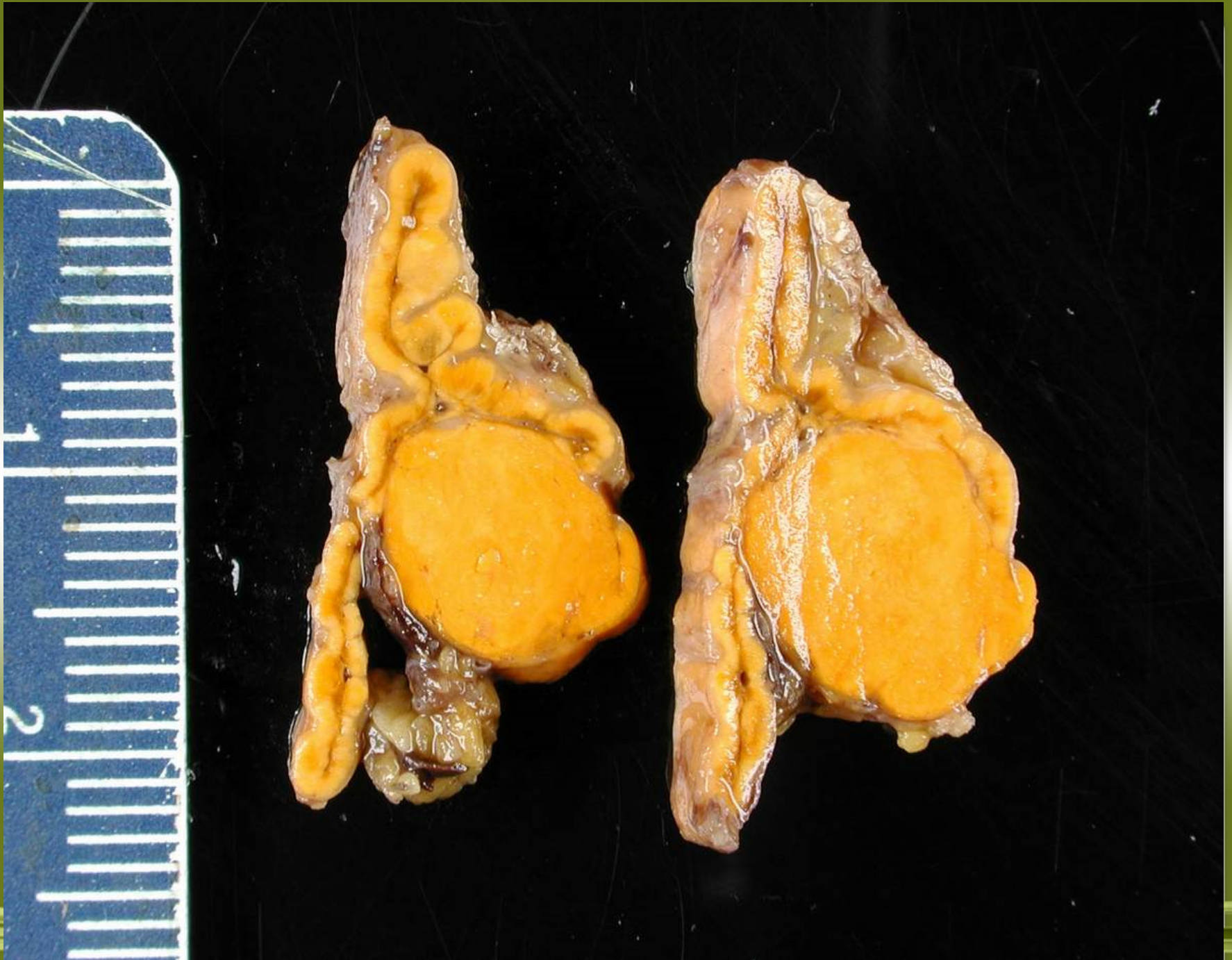
1. History of Hypoadrenia
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6. Patient Management

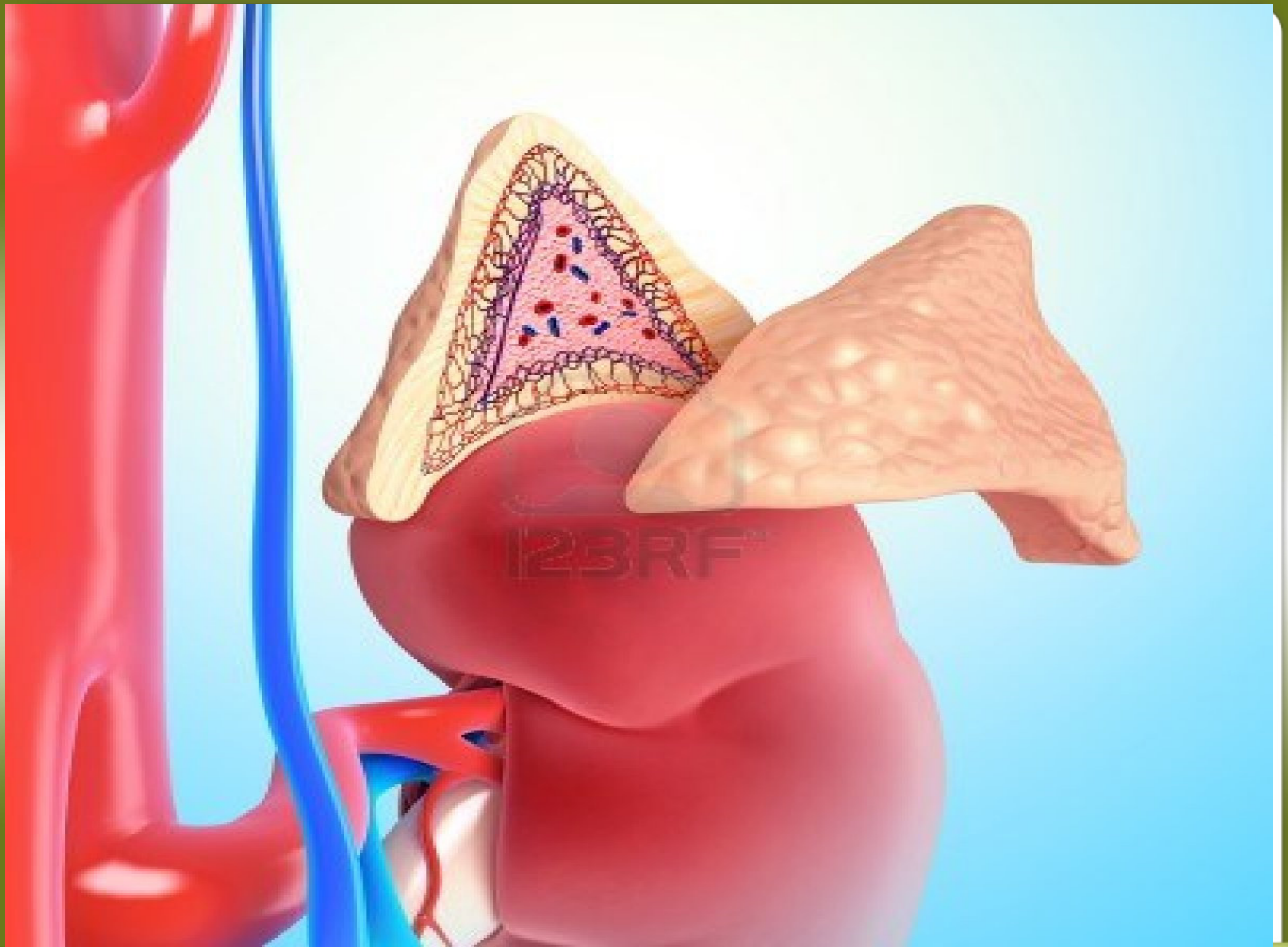
Anatomy of the Adrenal Glands

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

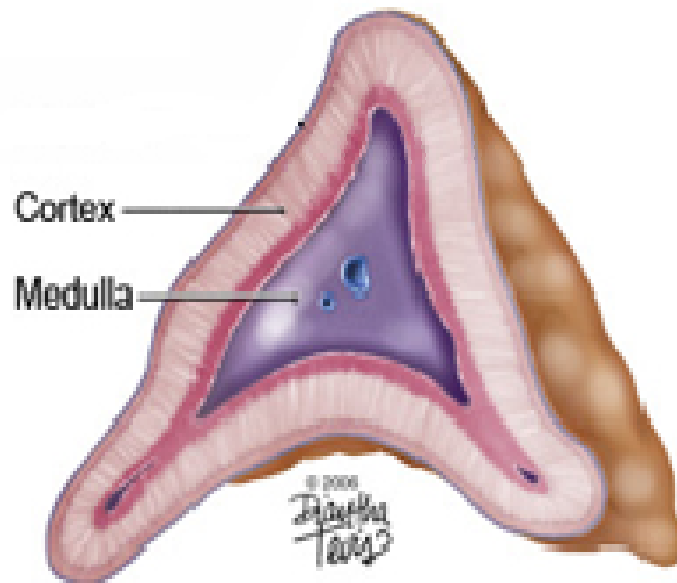
Ad- Renal



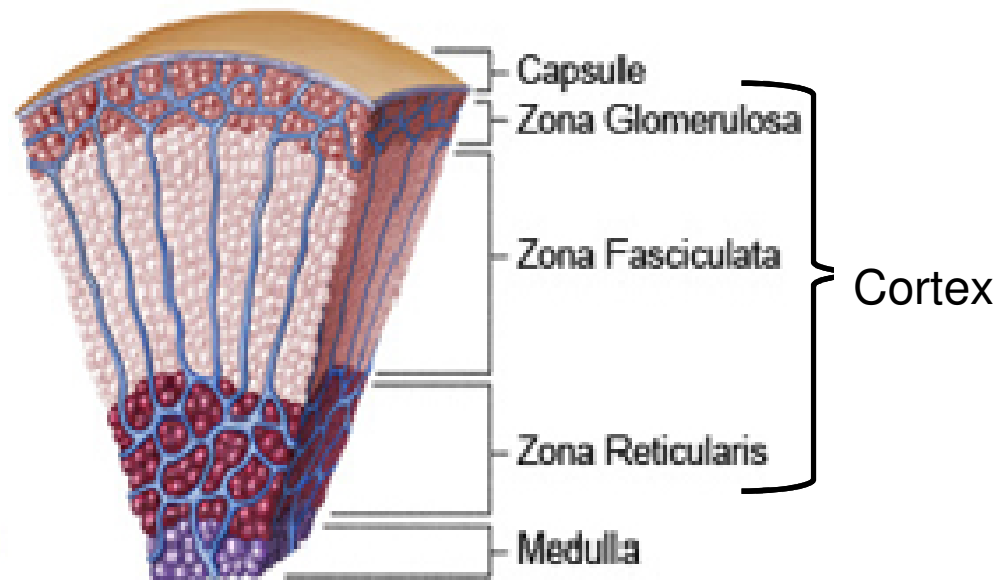




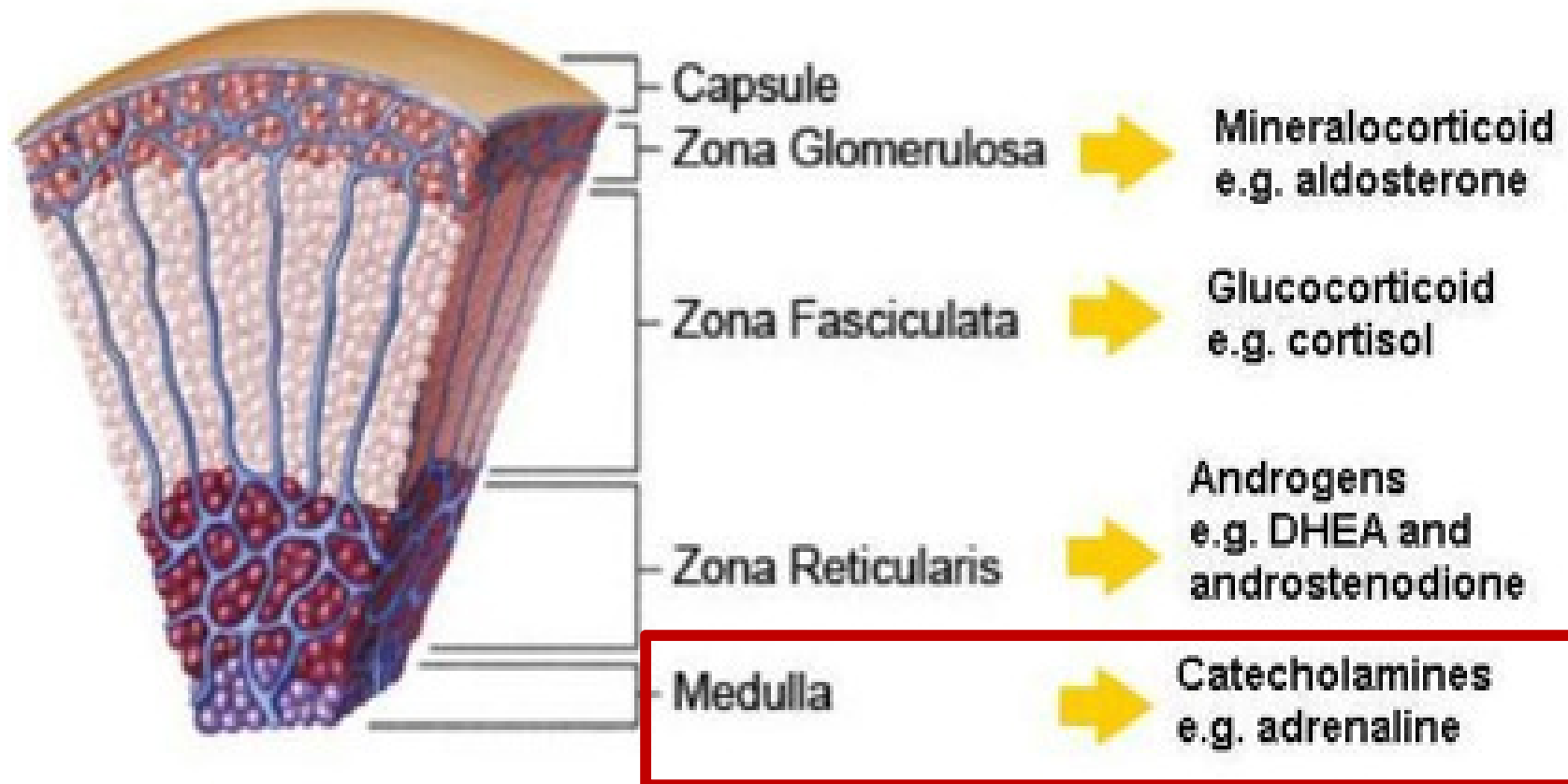
Transverse Section



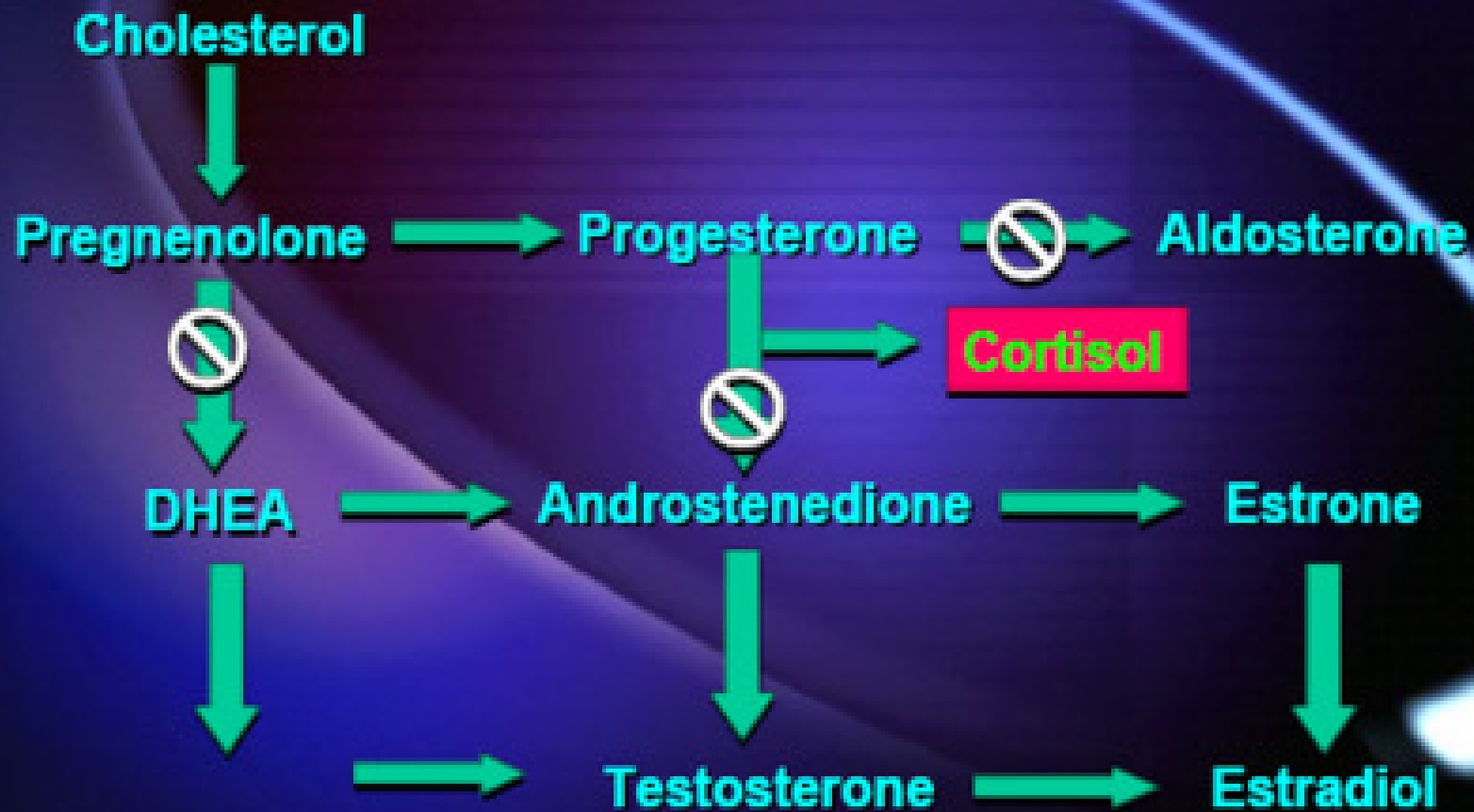
Microscopic Section



Different Sections of Adrenal Gland



Steroid Synthesis: Chronic Stress



Adrenal Medulla

Stimulated by sympathetic fibers

Hormones:

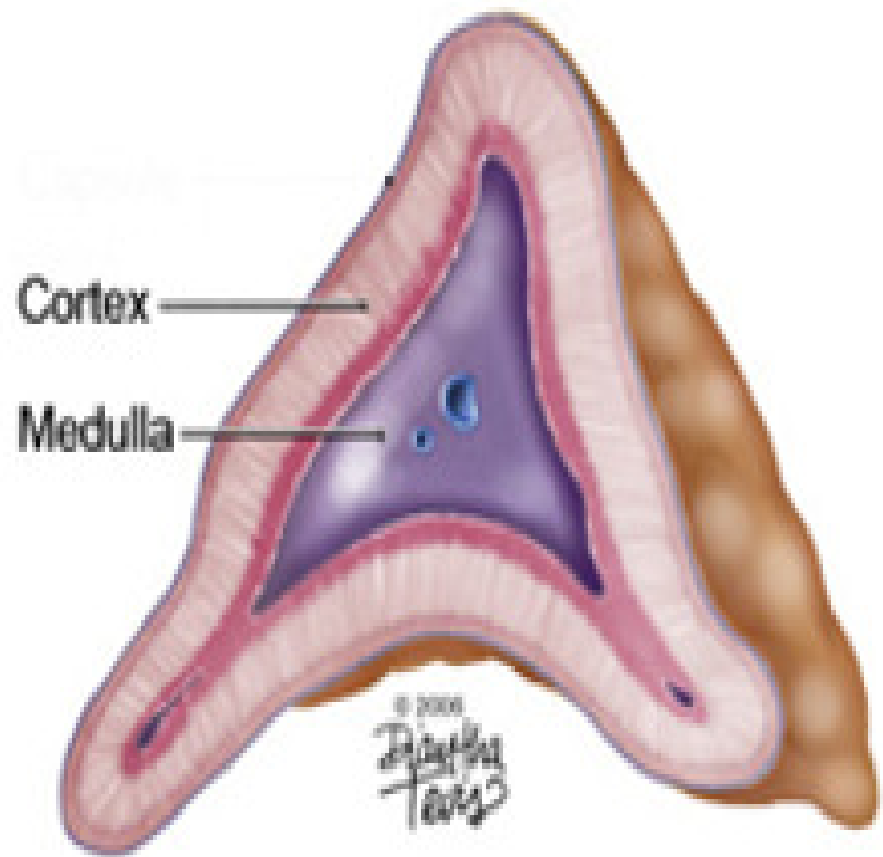
Epinephrine – Adrenaline

Norepinephrine – Noradrenalin

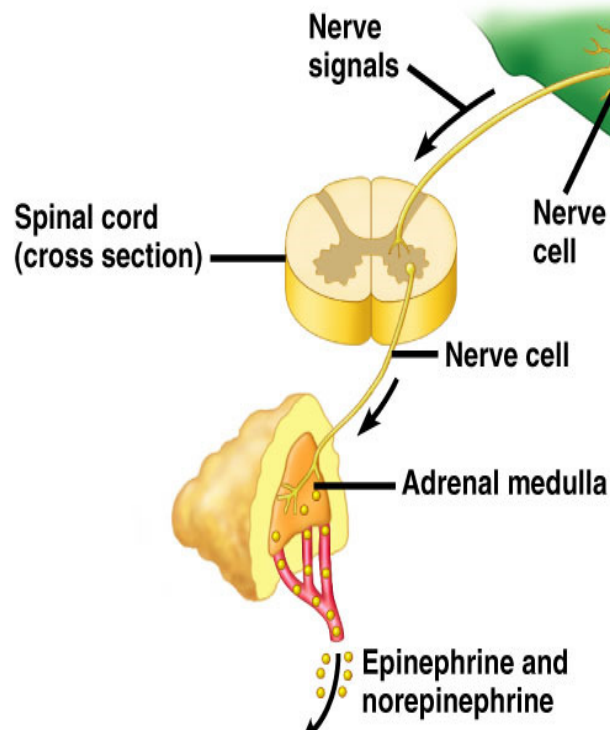
Effects:

- Dilate blood vessels
- Dilate bronchi
- Increase heart rate
- Increase strength of heart beat

“Fight or Flight”



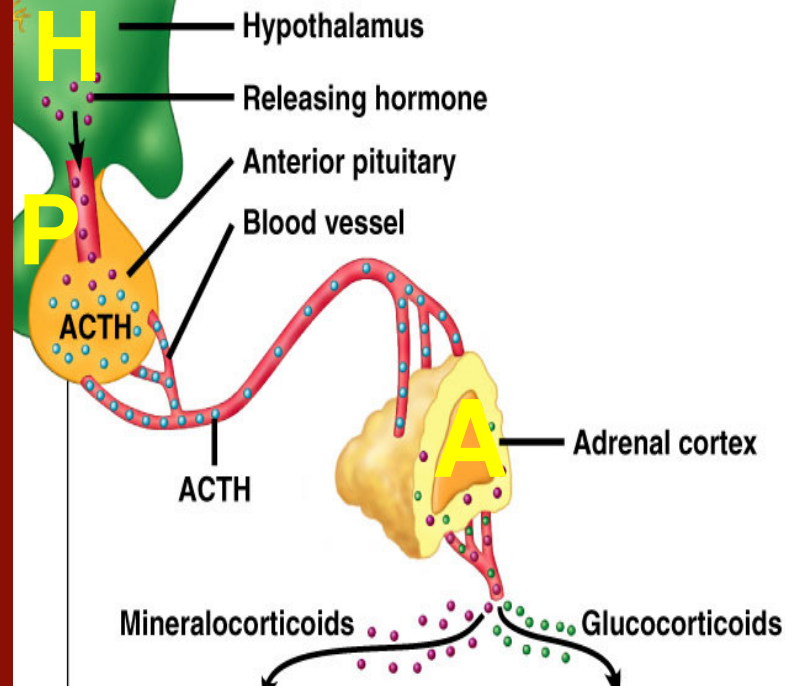
Sympathetic Response

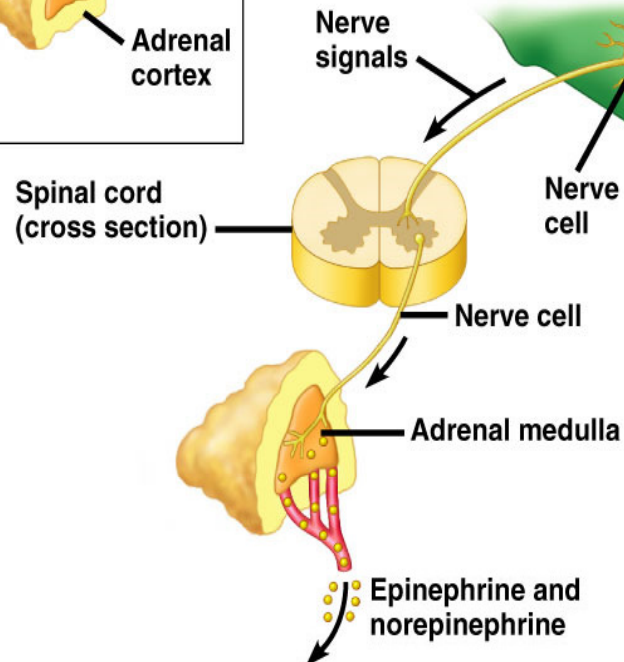
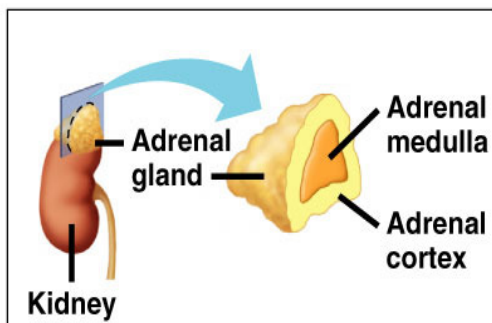


HPA Access



Stress



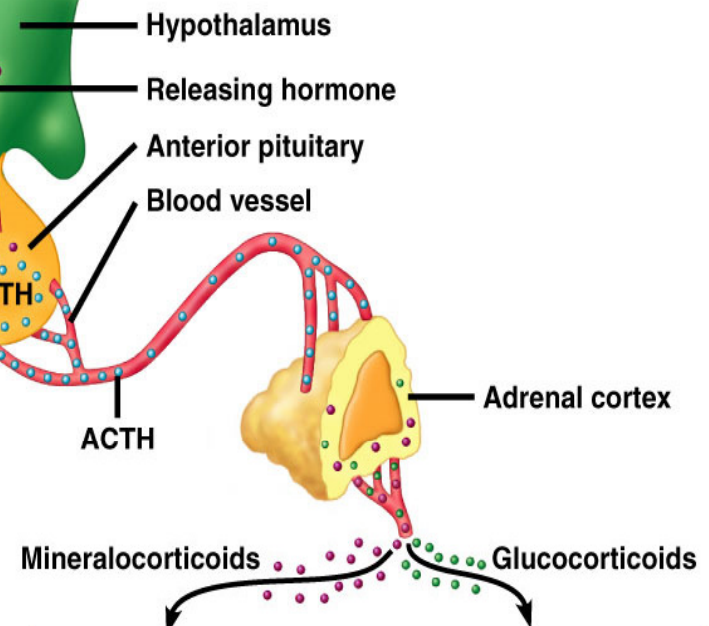


Short-term stress response

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



Stress



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

Hypothalamus

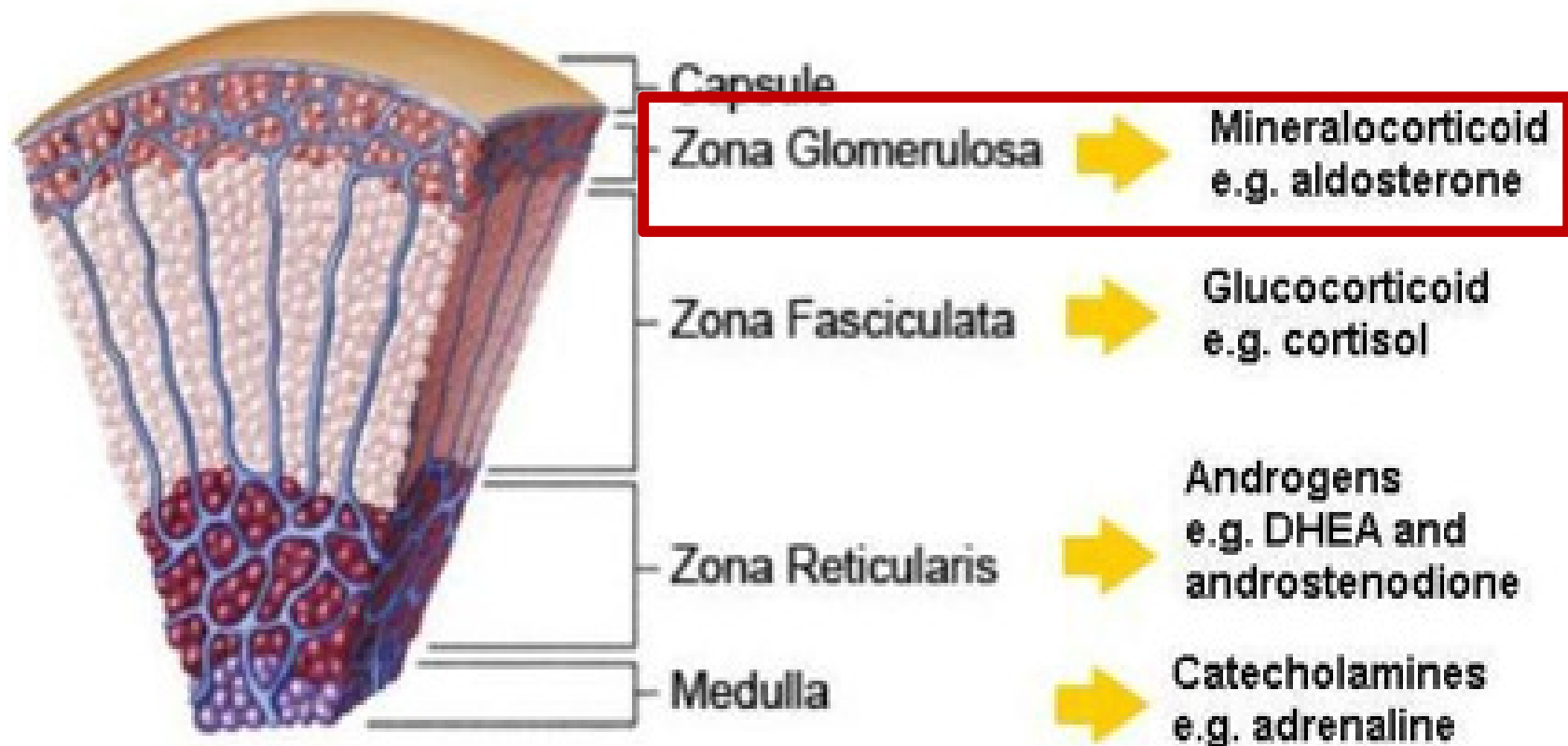
Pituitary

Outline

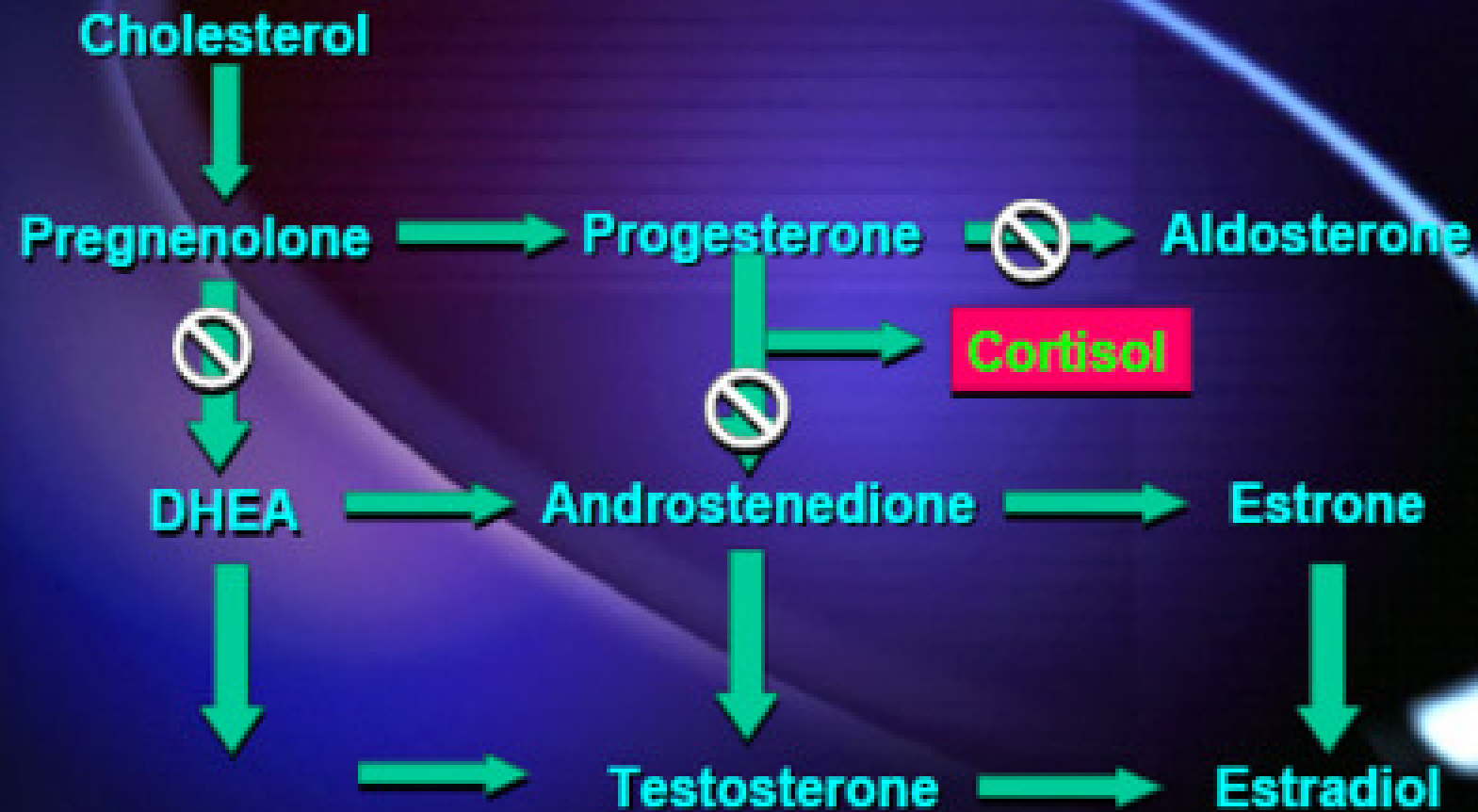
1. Classic Patient Presentation
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Different Sections of Adrenal Gland

“The Cortex”



Steroid Synthesis: Chronic Stress

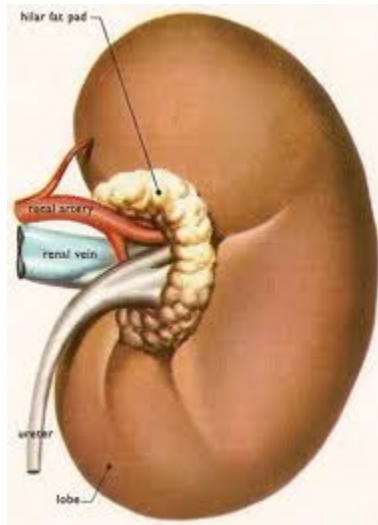


The Role of Aldosterone

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

↑ Aldosterone → Kidneys Reserve Water / Sodium

↓ Aldosterone → Kidneys Secrete Water / Sodium



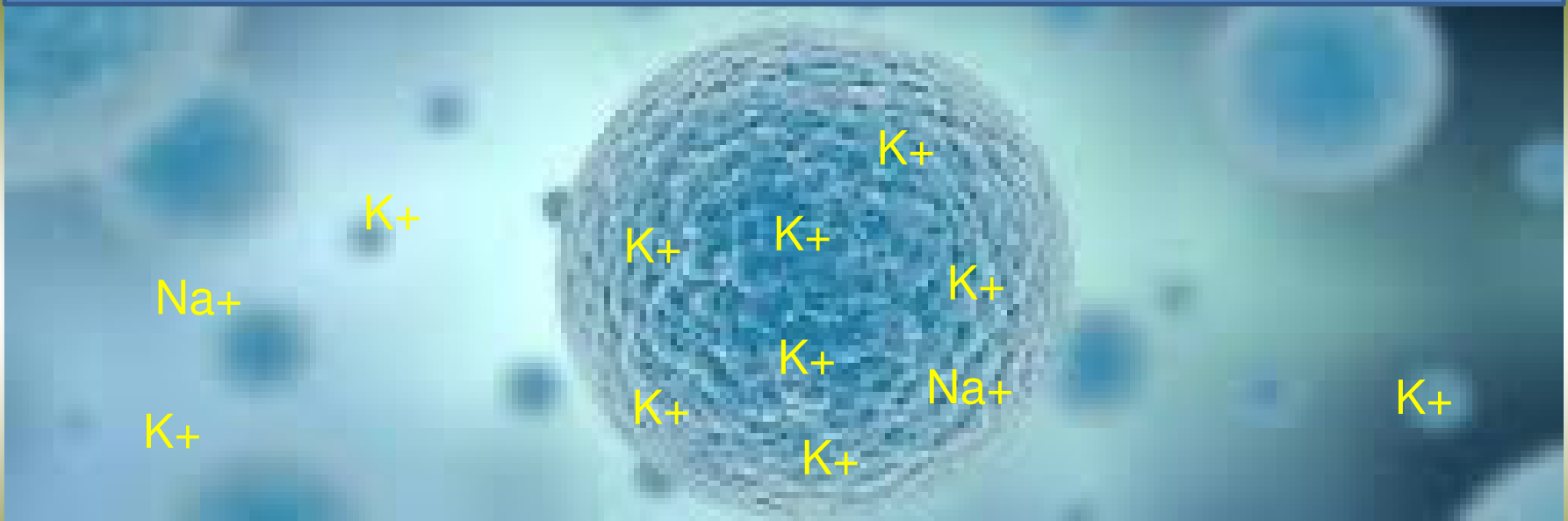


Would An Increase in Water Fix the Fluid Imbalance?

Decreased Aldosterone =  Sodium in Interstitial Fluid

Decreased Sodium in the Interstitial Fluid =  Water

Should the patient drink more water?



What would high water intake do to sodium concentration 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

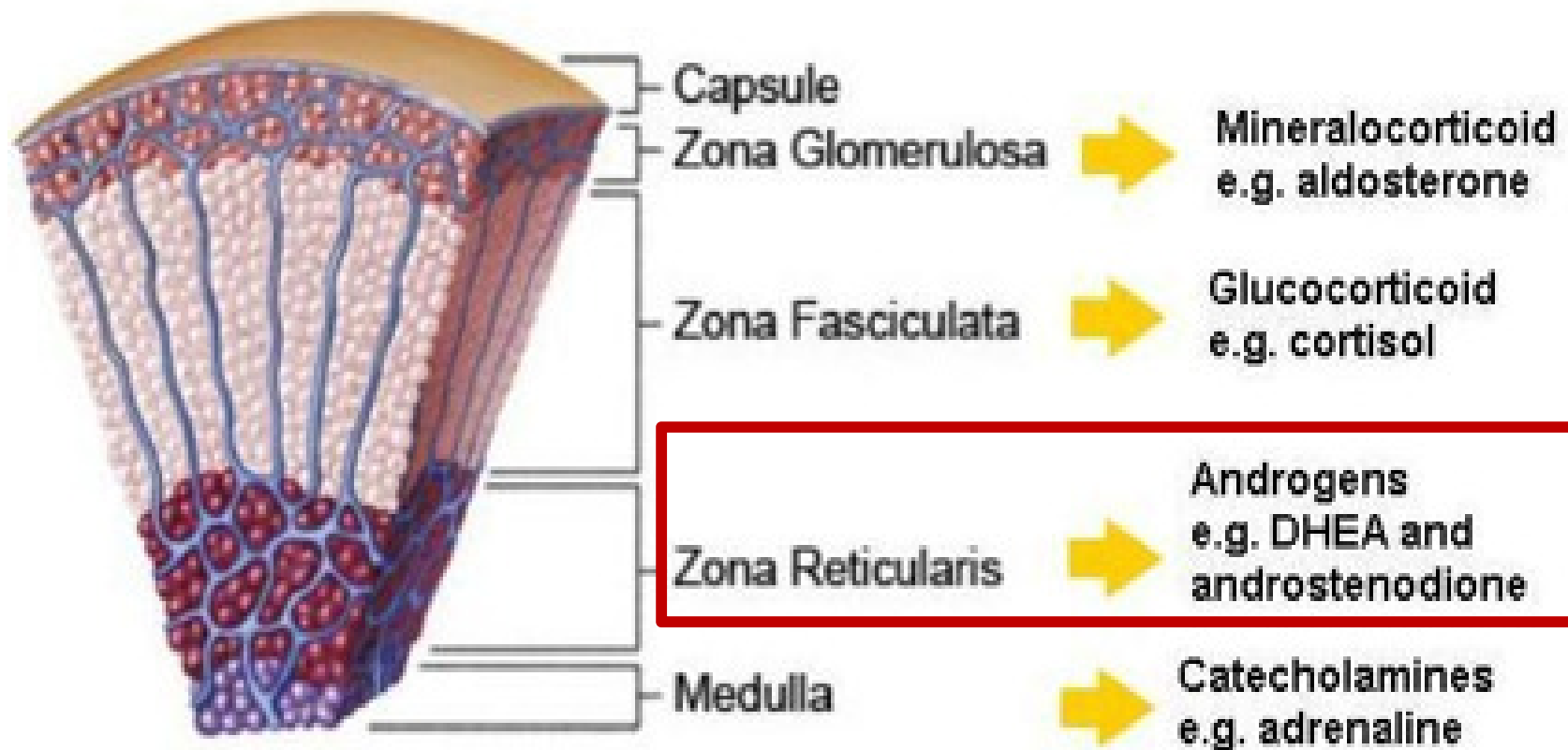
Tenderness at thoracolumbar junction Yes _____ No _____

SERGEANT'S LINE

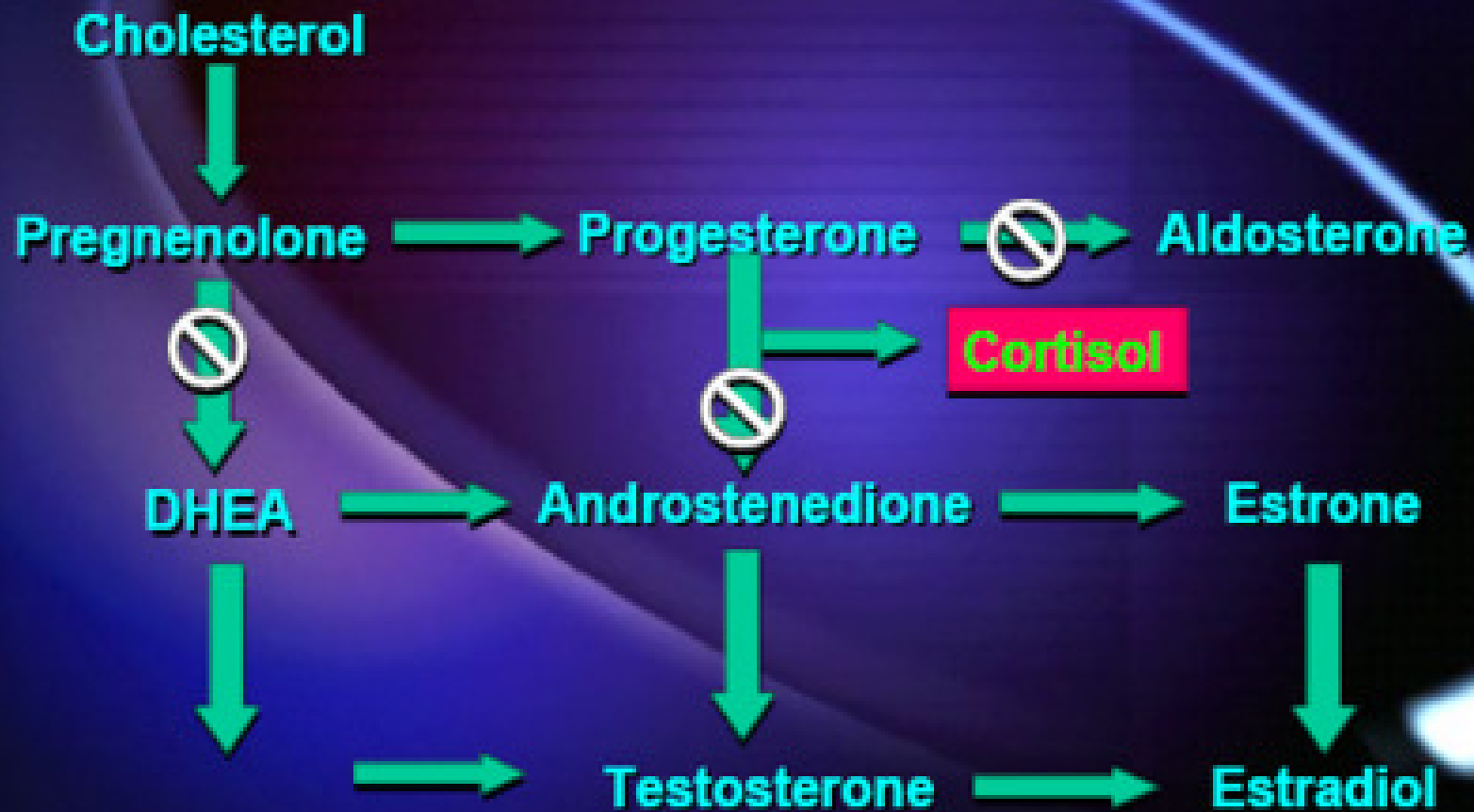
Run the back of a ball point pen along the bare abdomen. Normally turns reddish-pink within 30 seconds. If hypoadrenia is present it will remain white for over a minute. Called Sargent's White Line. Present approximately 40% of the time.

Positive _____ Negative _____

Different Sections of Adrenal Gland

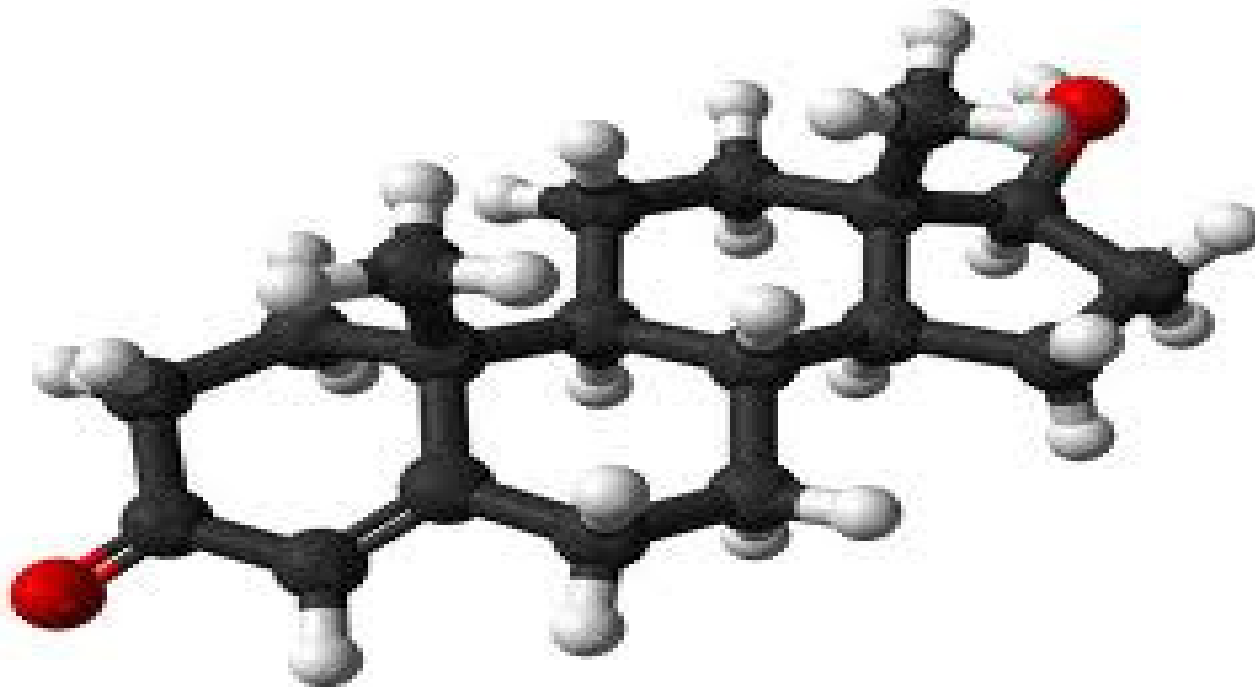


Steroid Synthesis: Chronic Stress



The Sex Hormones

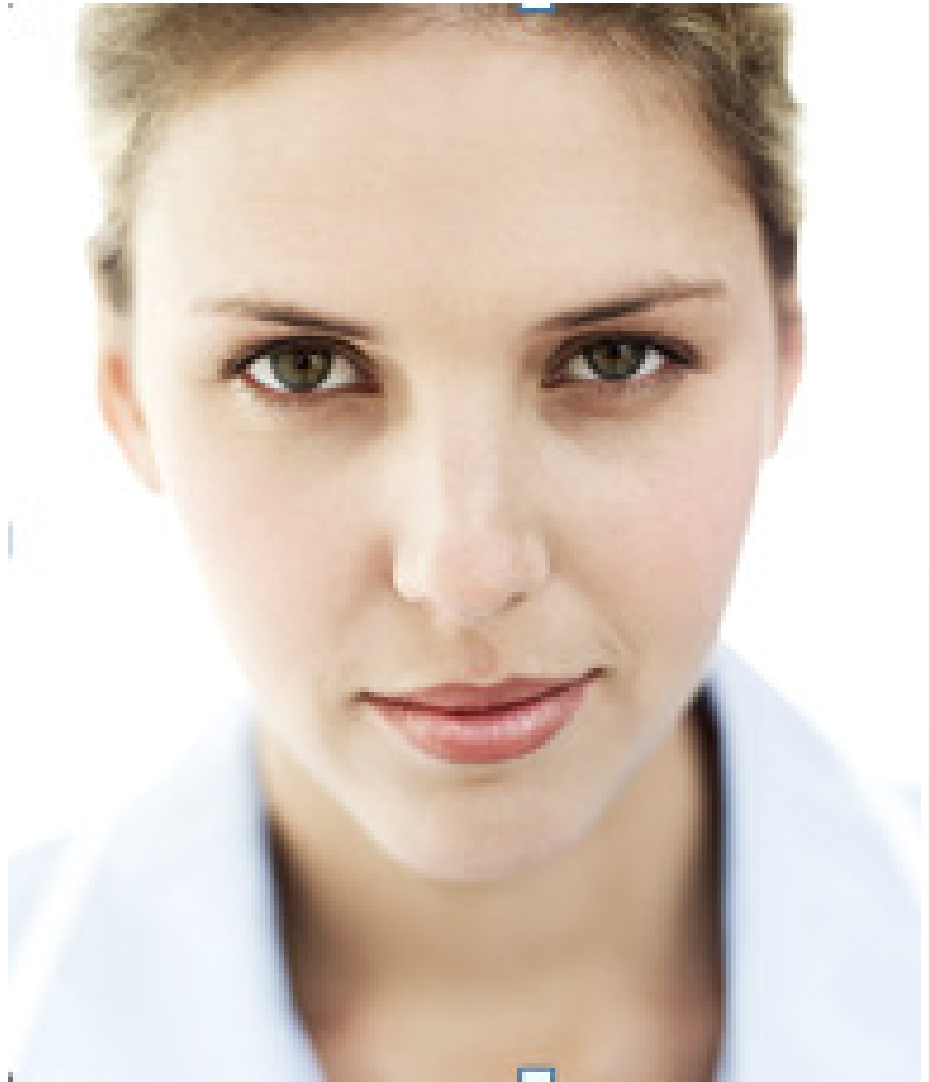
The adrenal gland provides the secretion of DHEA as well as testosterone, estrogen and progesterone.



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

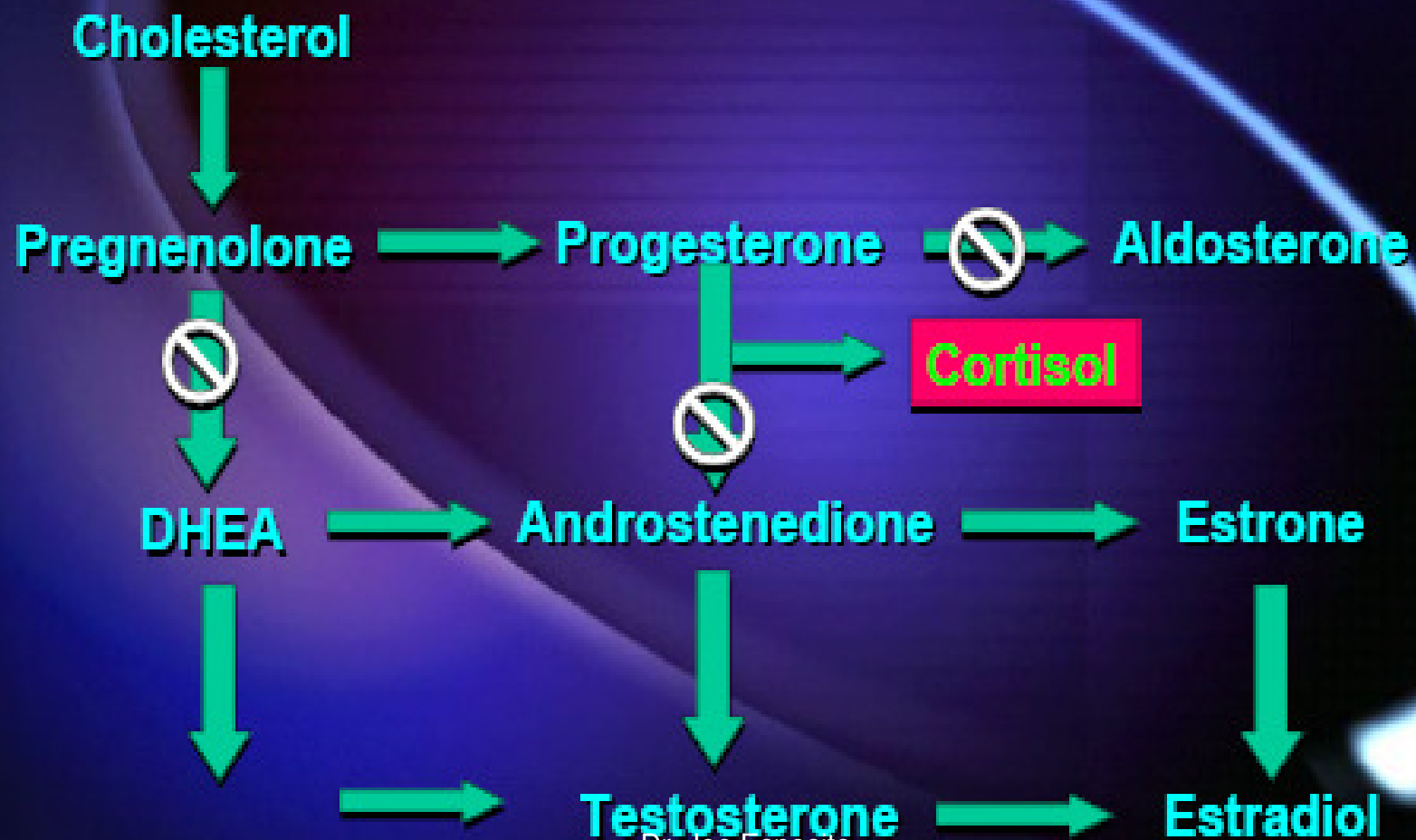
Since testosterone is a prime factor in sex drive why would Adrenal Fatigue cause a bigger impact in woman in regards to sex drive?

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





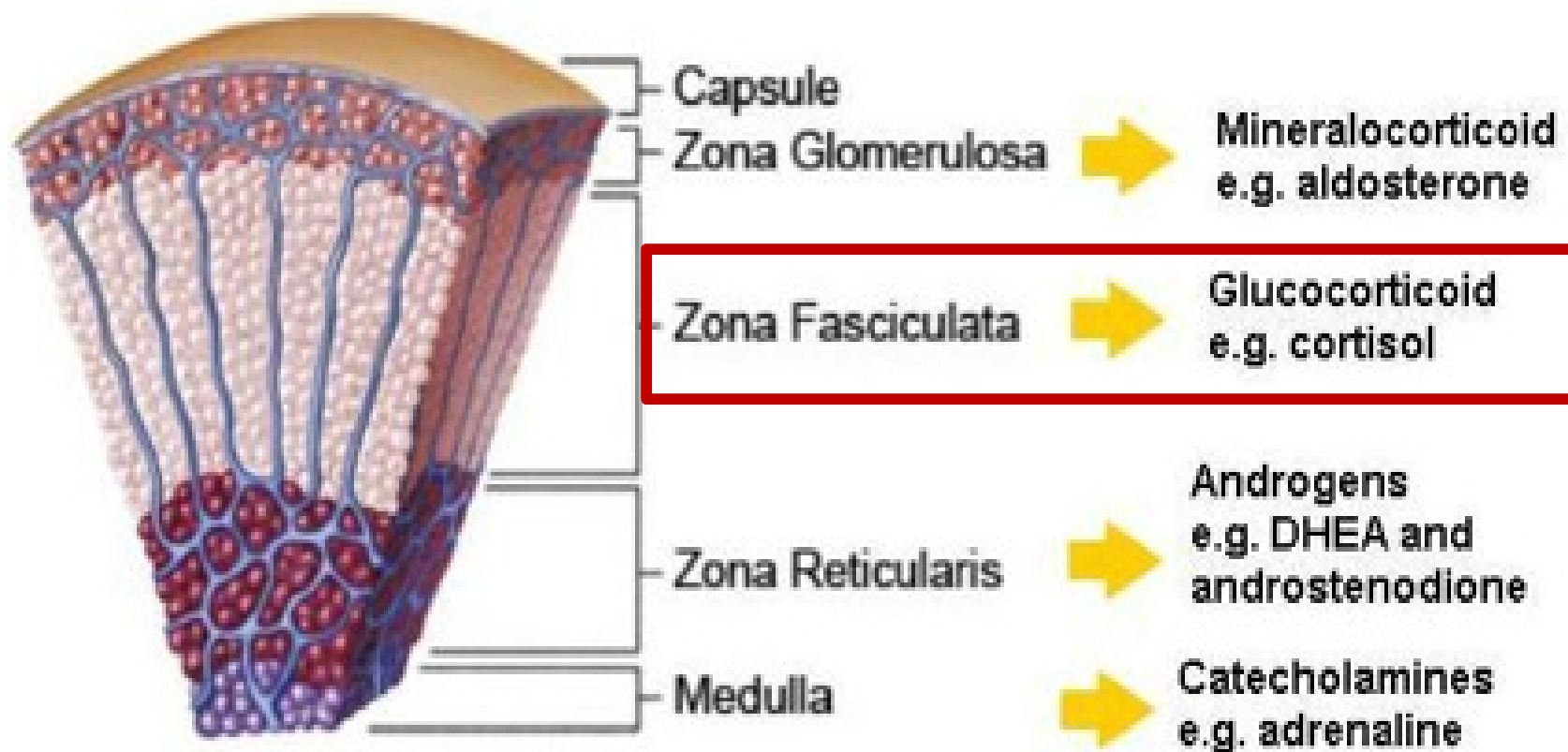
Steroid Synthesis: Chronic Stress



Dr. Joe Esposito

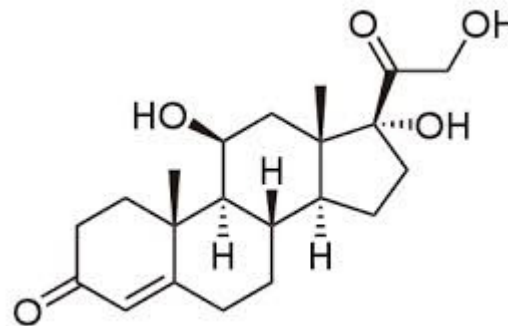
AlignLife Nutraceuticals, LLC 2009

Different Sections of Adrenal Gland



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 Aromotase Enzyme

Increase Estrogen

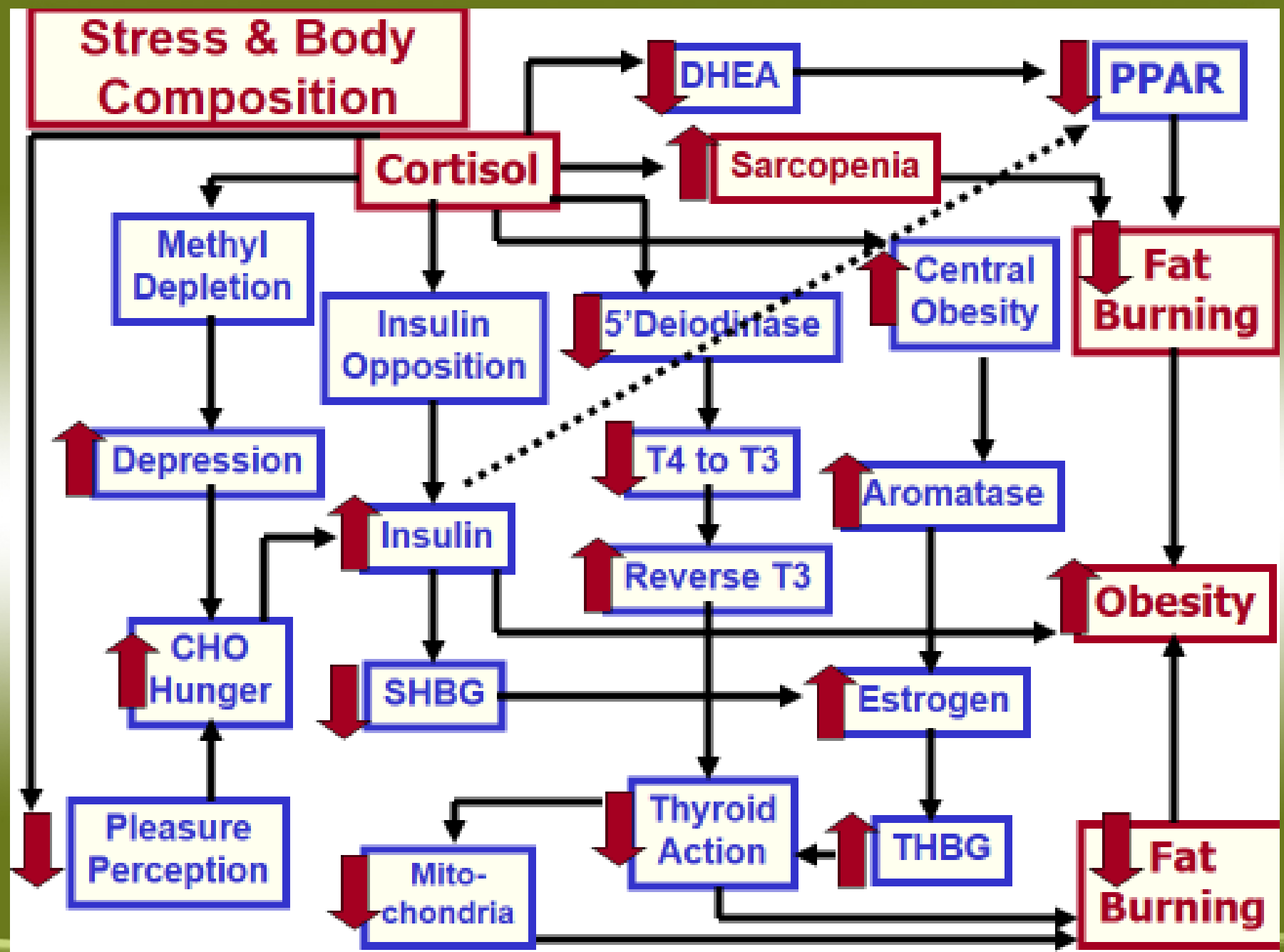
Decreases Thyroid

More Fatigue

More Sugar for Fatigue

More Cravings

(Rinse and Repeat)



Anti-Inflammatory Effect

(Make boobos 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.

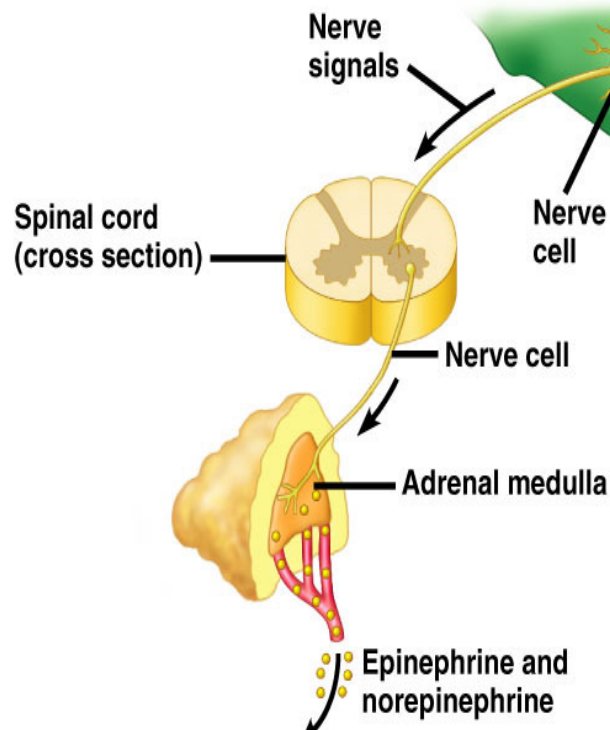
Protects the CNS

(Makes You Feel Good and Think Straight)

Cortisol effects your mood, behavior and memory.

High cortisol will actually cause atrophy of your hippocampus.

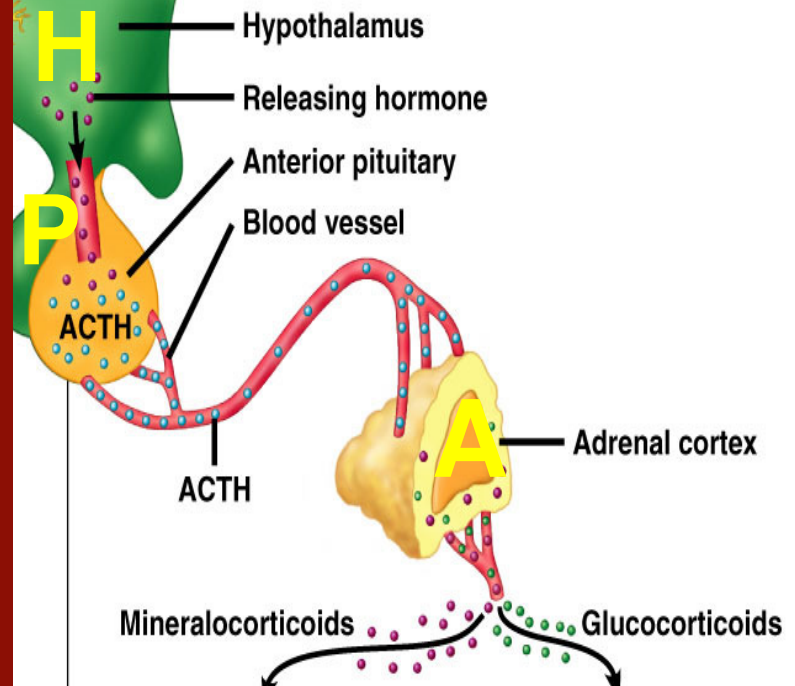
Sympathetic Response



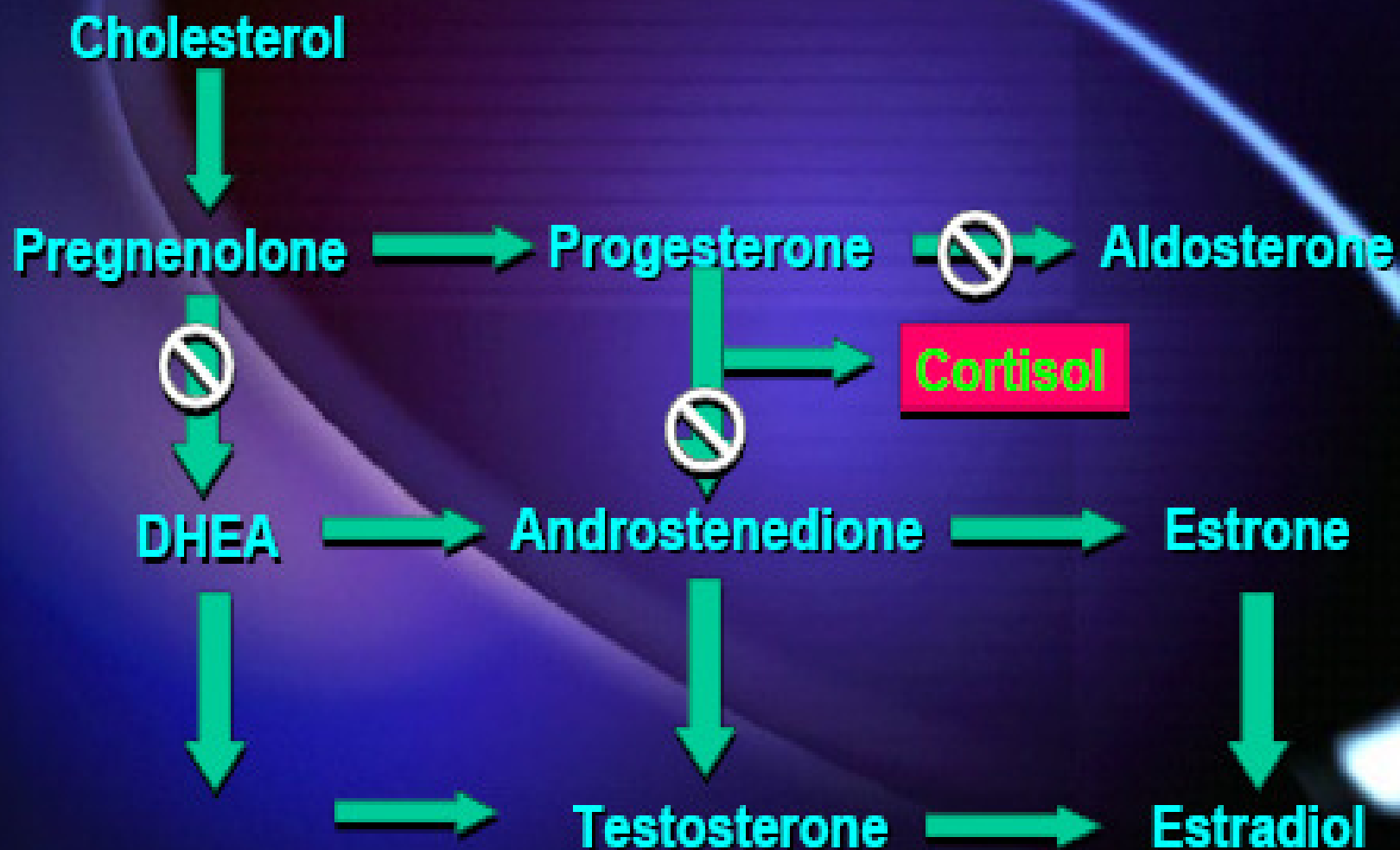
HPA Access



Stress



Steroid Synthesis: Chronic Stress



Types of Stress

ENVIRONMENTAL

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

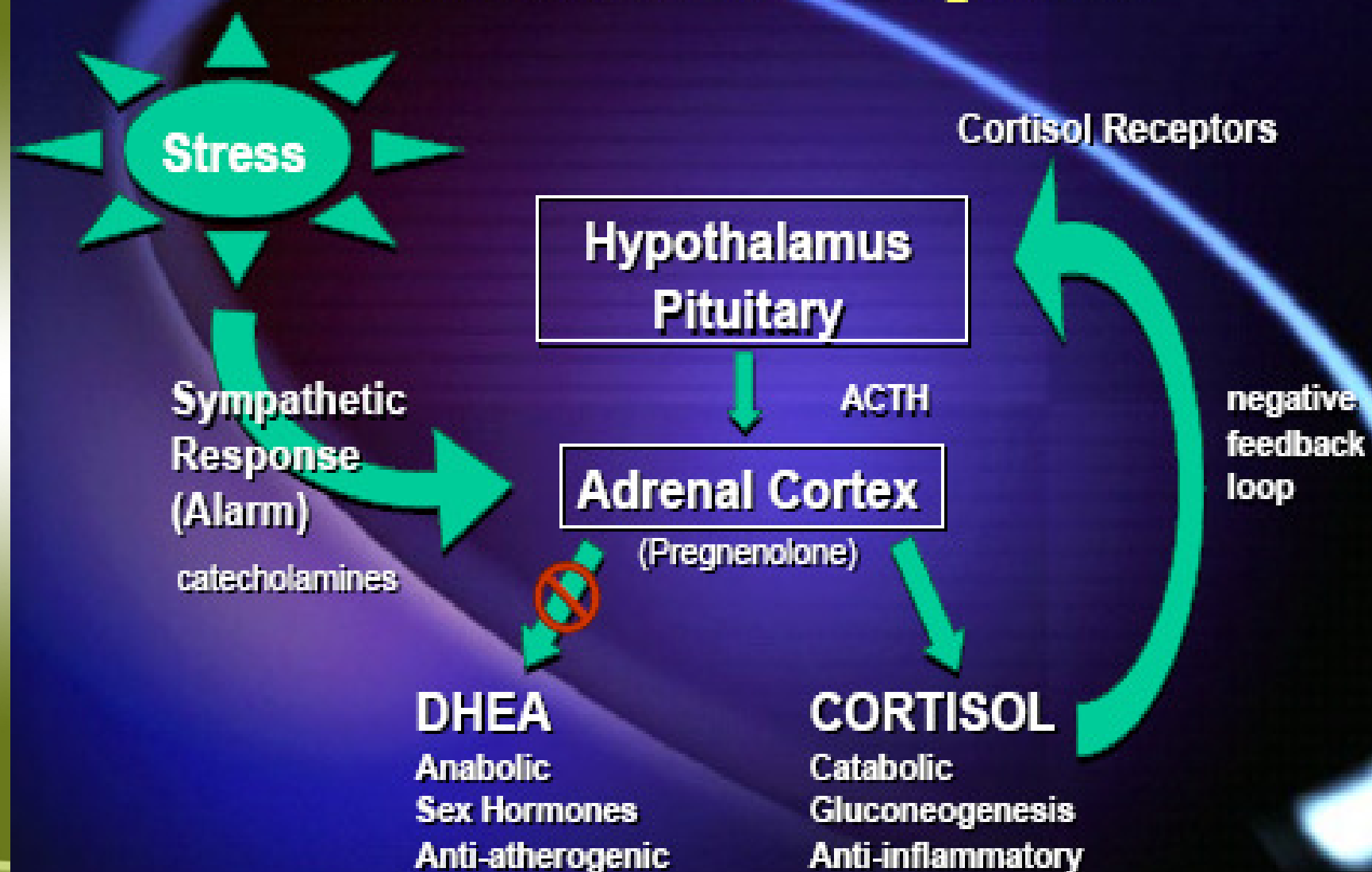
MENTAL

- Fear/anxiety/worry
- Depression

PHYSIOLOGICAL

- Starvation
- Infection
- Poor sleep
- Excess exercise
- Pain
- Hypoglycemia
- Inflammation

Normal Stress Response



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?

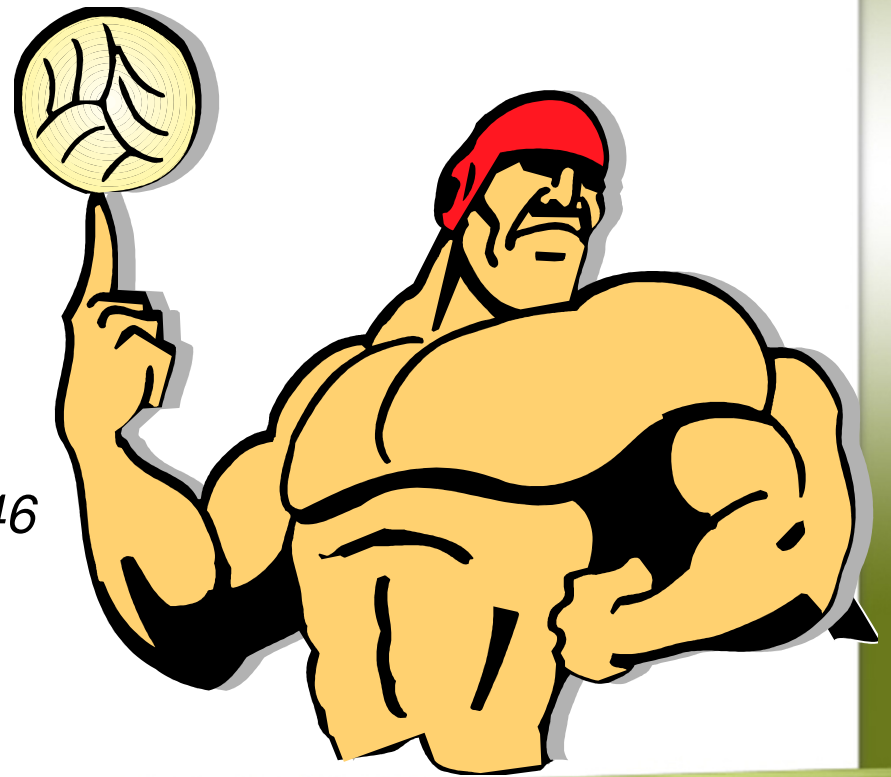
- “Cortisol causes mobilization of amino acids from extrahepatic tissue, mainly from muscle. As a result, more amino acids become available in the plasma to enter into the gluconeogenesis pathway and promote the formation of glucose.”

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



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

How to Diagnosis

- **Symptom Survey – Consultatic**
- **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)

Functional In-Office Testing

BLOOD PRESSURE TEST

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.



Functional In-Office Testing

SERGEANT'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.

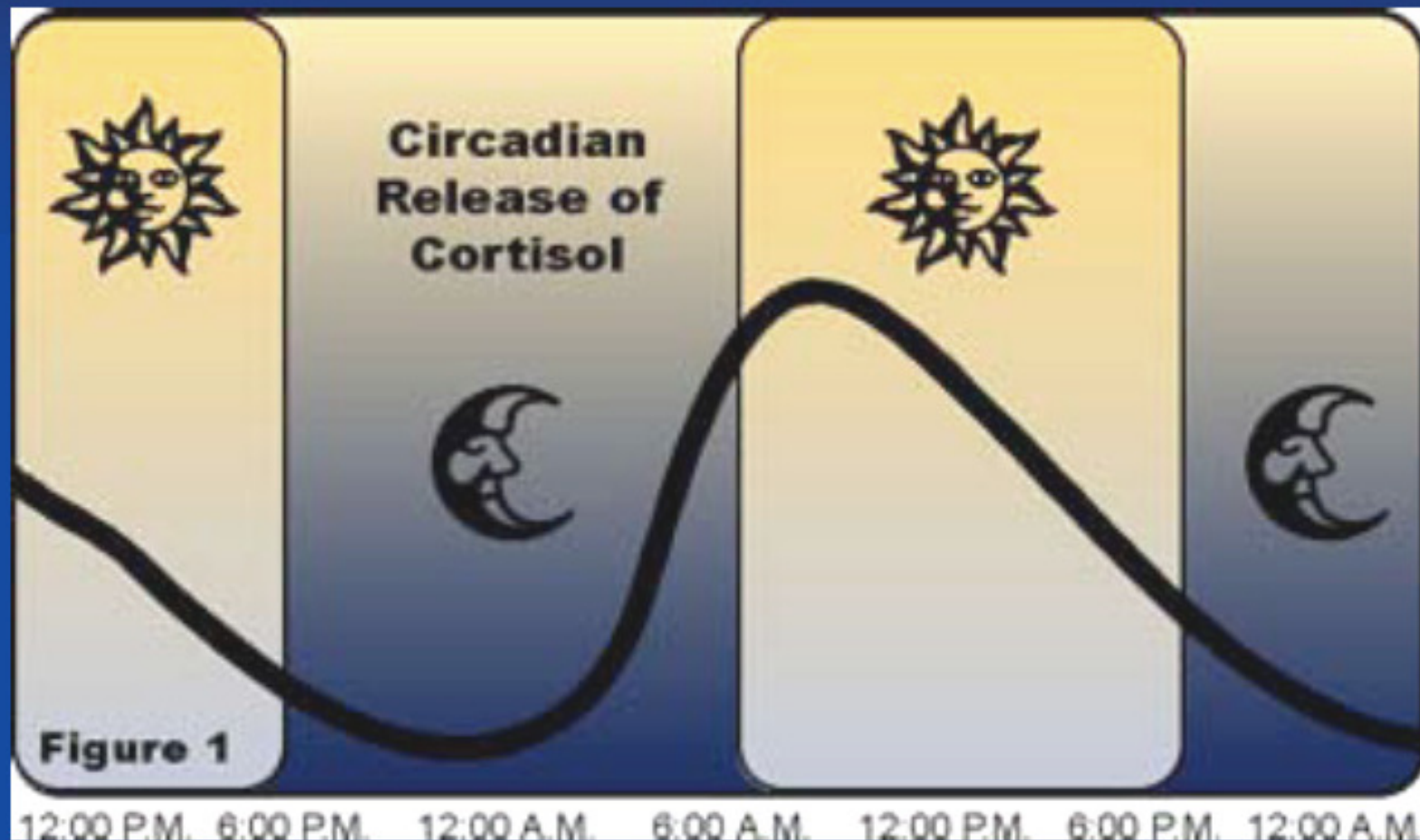


Laboratory Testing

Salivary Testing

- Cortisol x4
- DHEA x1

Daily Cortisol Cycle



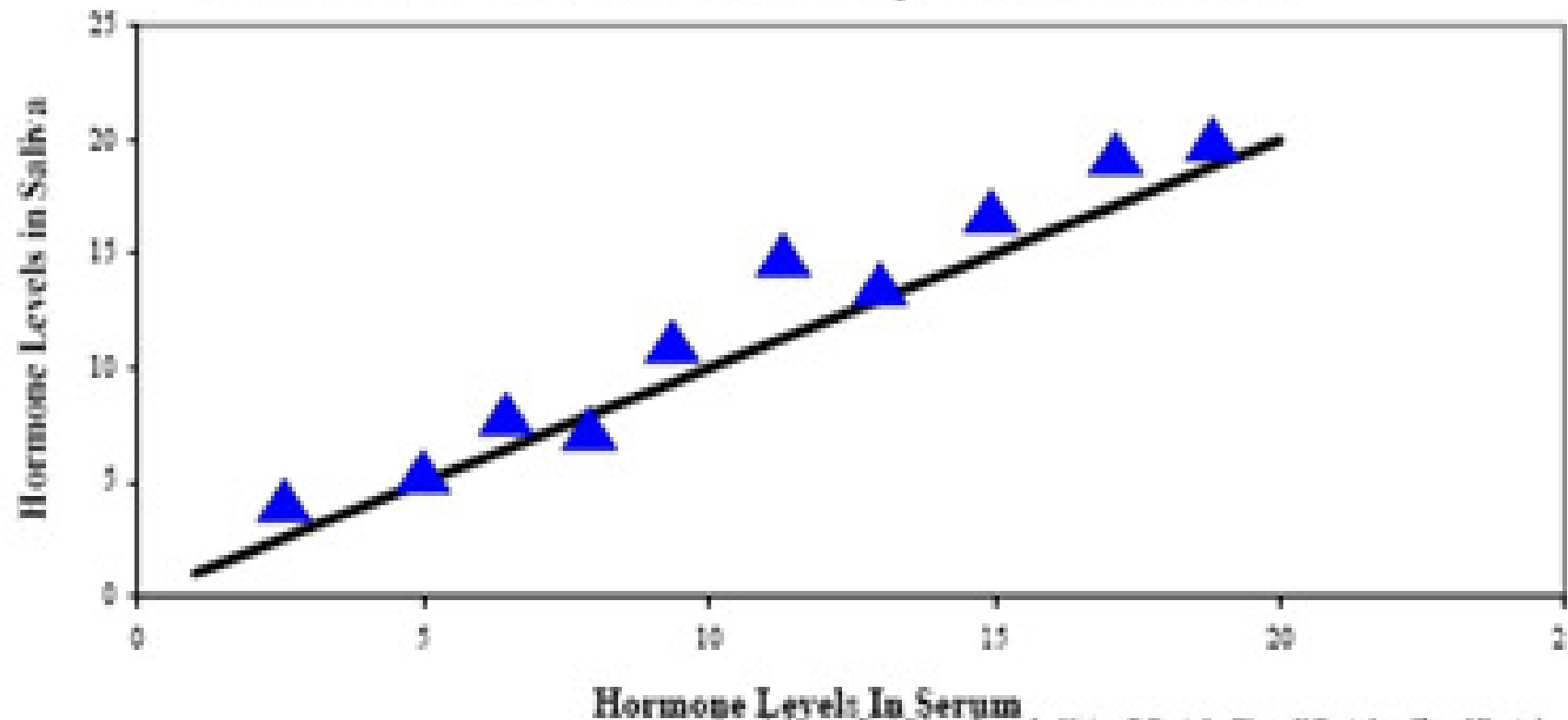
Advantage of Salivary Collection

- 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



Compiled From: East-Petry, D., et al. - Yimig, R.F., et al. - Wang, Y.F., et al. - Chen, J.K., et al.

Salivary Cortisol Better Measure of Adrenal Cortical Function

[Ann Clin Biochem](#). 1983 Nov;20 (Pt 6):329-35.

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

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

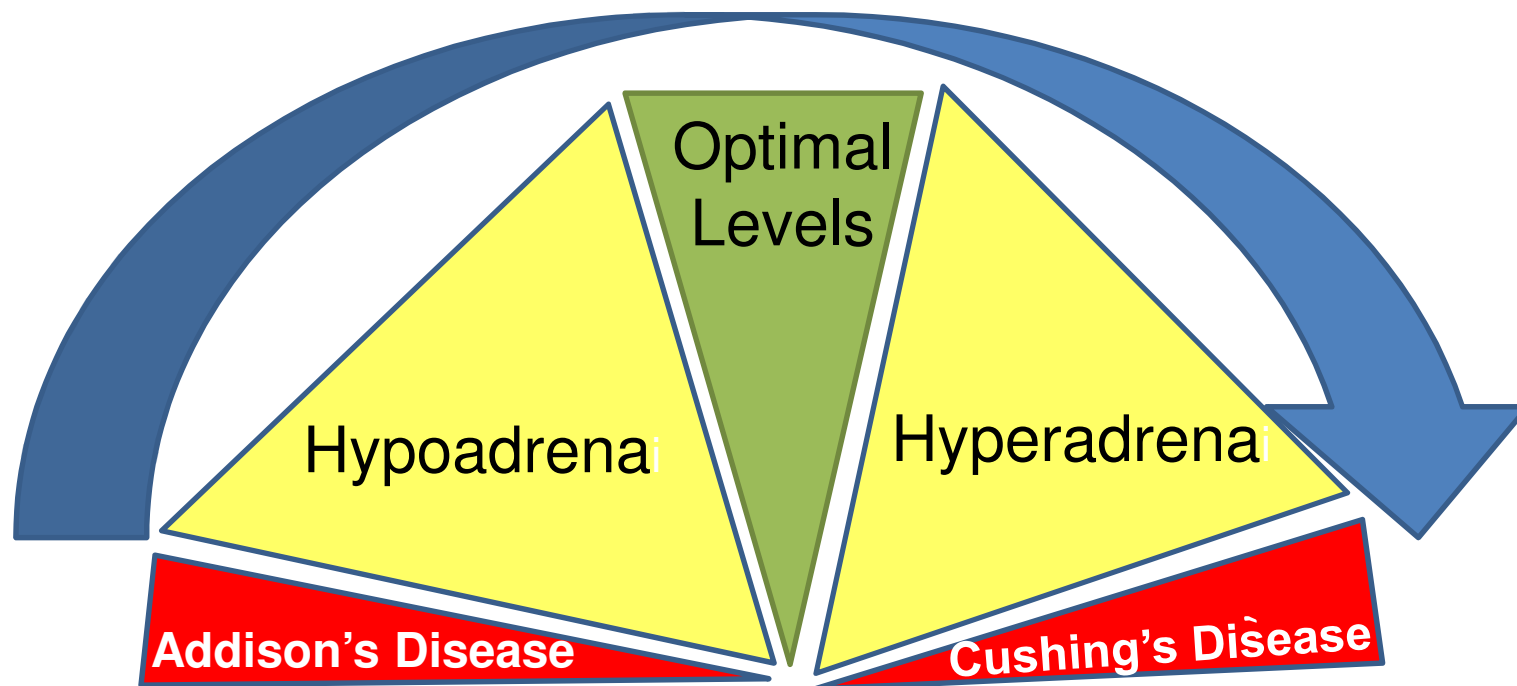
Abstract

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 normal 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 rate of 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.

PMID: 6316831 [PubMed - indexed for MEDLINE]

Annals of Clinical Biochemistry

Normal Values



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 benzodiazapenes, 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

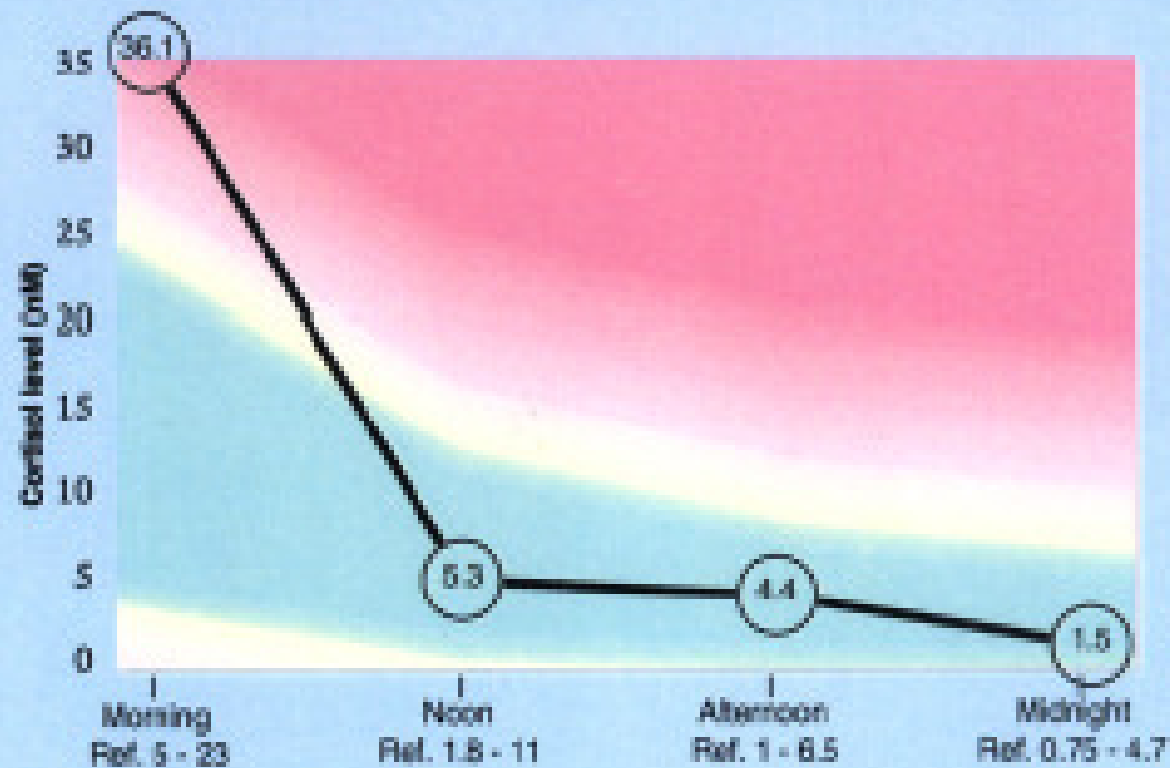
“Stressed and Tired”

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

Need Adrenal Boost Program



Salivary Cortisol



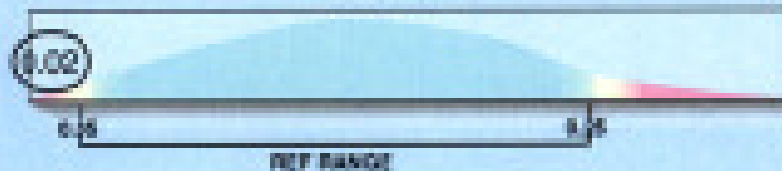
8 a.m. DHEA (nmol/L)

Normal	Abnormal
0.8	0.02




8 a.m. DHEA/Cortisol

0.02



Adrenal Boost

- **Adaptagenic Adrenal Herbal Support**
Stress Relief (2 QD)
- **Vitamin C**
Active-C (1 BID)
- **Glycemic Regulation**
Sugar Balance(1 TID)
- **Pregnenolone (2 QD)** 

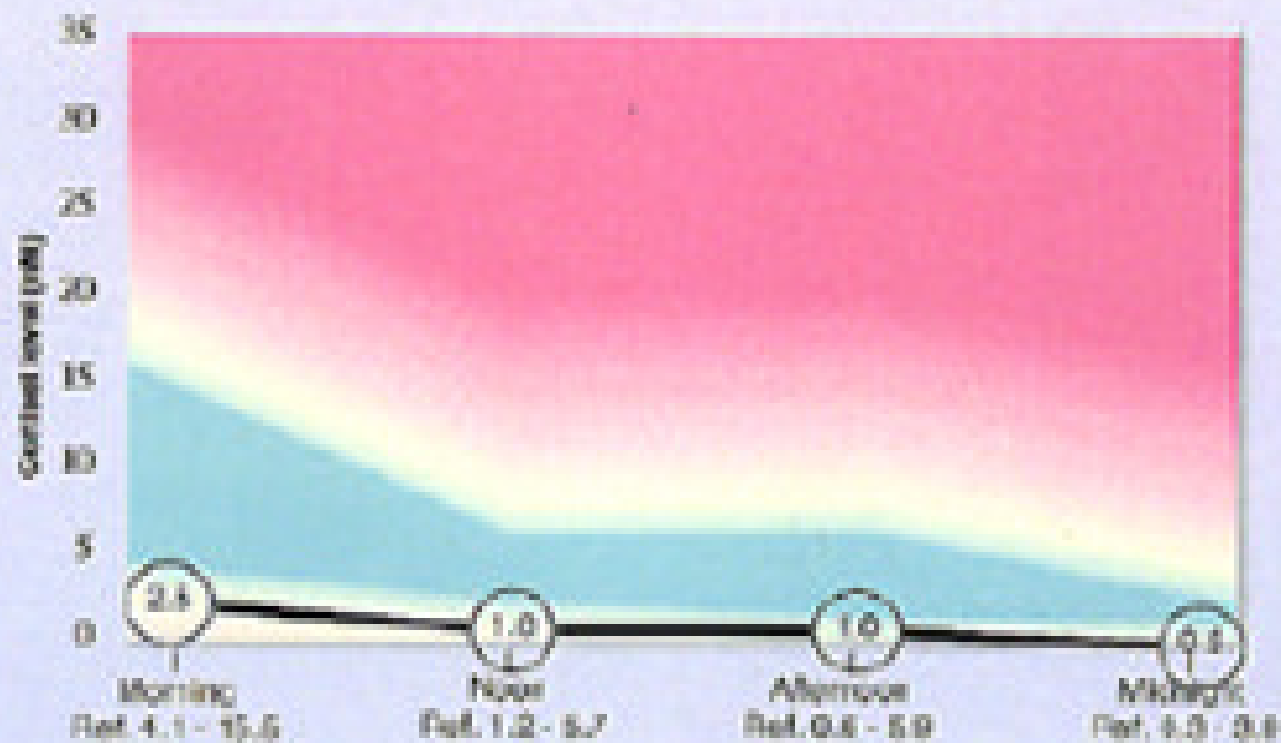
Stage 3 – Adrenal Exhaustion

“Tired Than Wired”

- Both Cortisol and DHEA are low
- Depression and Exhaustion

Need Adrenal Restoration Program

Salivary Cortisol



DI IEA-G nmol/L

Normal Abnormal

1.6

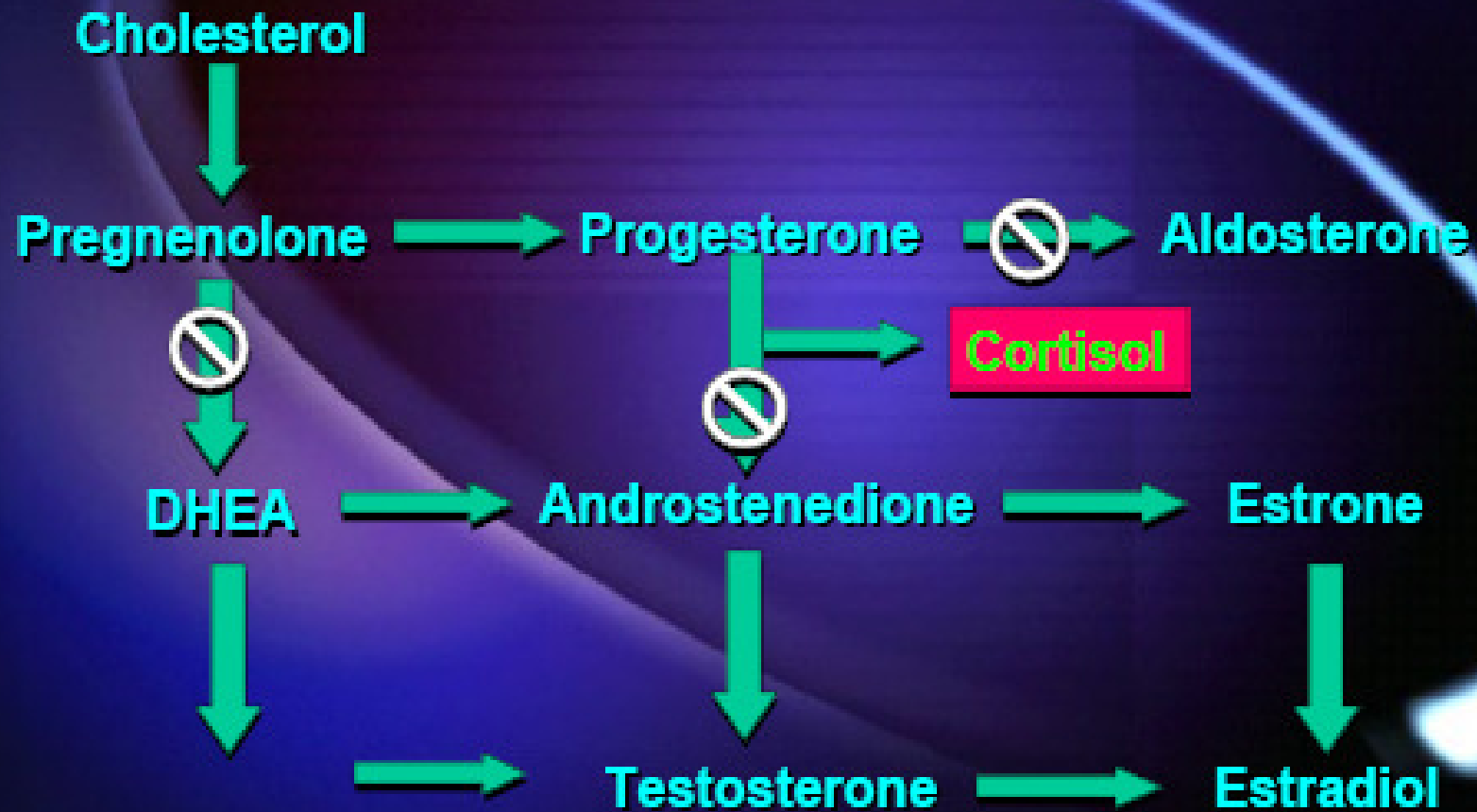


DI IEA-G / Cortisol



1.04



Steroid Synthesis: Chronic Stress



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)



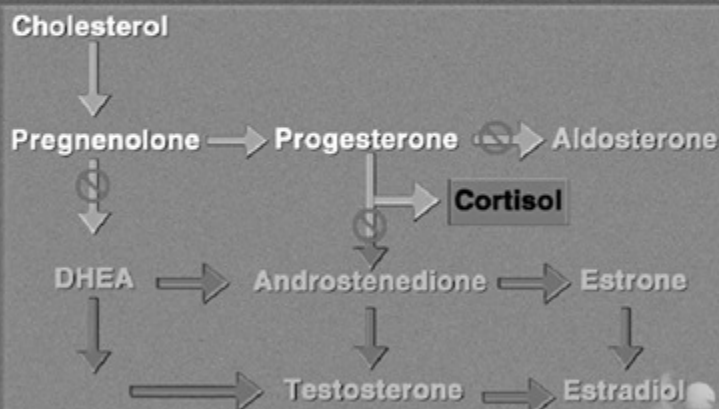
Your Adrenal Report

Name: Date:

The adrenal gland is a small triangular-shaped tissue above each of your kidneys. It is responsible for many vital body functions include 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 enhancement. 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.

Steroid Synthesis-Chronic Stress



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:

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 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)

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)

If DHEA is Deficient - (Add Addition \$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 $\frac{1}{2}$ to $\frac{3}{4}$ 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

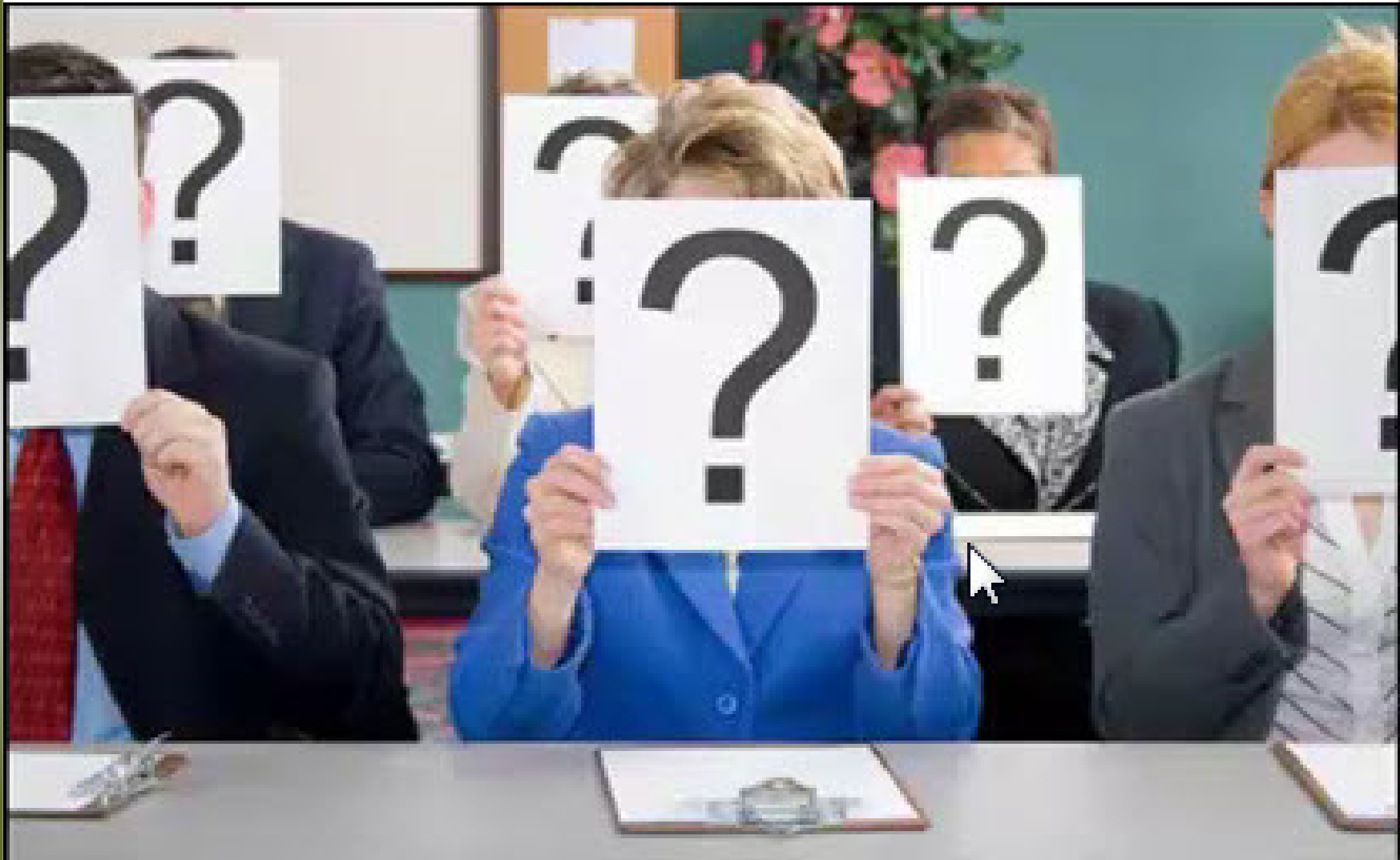
Nutrient	Morning	Afternoon	Evening
Stress Relief	2	1	
Active-C Tabs	1	1	1
Sugar Balance (with meals)	1	1	1
DHEA (if needed)	Men 2 Women 1		

☐ Your Adrenal Boost Supplement Schedule

Nutrient	Morning	Afternoon	Evening
Stress Relief	2	1	
Pregnenolone	3		
Active-C Tabs	1	1	1
Sugar Balance (with meals)	1	1	1
DHEA	Men 2 Women 1		

☐ Your Adrenal Restoration Supplement Schedule

Nutrient	Morning	Afternoon	Evening
Stress Relief	2	1	
Pregnenolone	3		
Adrenal Restore	2		
Active-C Tabs	1	1	1
Sugar Balance (with meals)	1	1	1
Sleep Aid			2
DHEA	Men 2 Women 1		



Interested in More Information?

Come to Booth 42

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

Contact AlignLife Nutraceuticals

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