

Adrenals

**Are Your Patients
Sick and Tired of
Being Sick and Tired**

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WITH NUTRITION SEMINARS



This booklet is going to help resolve adrenal dysfunction problems by reviewing the following:

- **Basic physiology of the adrenal glands.**
- **Questions to ask your patients.**
- **Dietary changes to support adrenal problems.**
- **Evaluating blood chemistry for adrenal problems.**
- **How to evaluate a Ragland test and Paradoxical Pupillary Response.**
- **Determining what supplements are beneficial.**

Adrenal Gland Physiology

The adrenal gland has two parts:

- **Inner adrenal medulla** is part of the sympathoadrenal system, made up of pre and postganglionic nerves, the sympathetic nerves. It regulates three hormones: dopamine, norepinephrine and epinephrine. Epinephrine is the most prevalent of the three making up about 80 percent of the hormones.
- **Outer adrenal cortex** is the larger part of the adrenal gland which regulates three hormones: glucocorticoids, mineral corticoids and androgens (sex hormones).
- **Glucocorticoids:** Cortisol is the most predominant glucocorticoid. Glucocorticoids are responsible for controlling blood sugar, cellular repair and regulating your immune system. Also, promoting protein and RNA metabolism.
- **Mineral corticoids:** Aldosterone is the most predominant mineral corticoid. Mineral corticoids are responsible for regulating electrolytes, primarily reabsorption of sodium and excretion of potassium.
- **Androgens:** The major androgen is DHEA, a precursor to cortisol. It also produces small amounts of progesterone, DHEA can also transmute to estrogen and testosterone.

Pre-Disposing Factors and Clinical Indicators

Adrenal Hyperfunction:

- Adrenal tumor
- Anterior pituitary dysfunction or pituitary adenoma. Either pituitary or adrenal adenoma can cause extreme weight gain and excess hair growth with females.
- Stress, both physiological and perceived.
- Syndrome-X/Metabolic Syndrome (increased triglyceride to cholesterol ratio with decreased HDL cholesterol and increased LDL cholesterol).
- Lung tumors, cancer, most common in males.

Adrenal Hypofunction:

- Craving for salt
- Chronic illness
- Reactive hypoglycemia
- Chronic stress
- Decreased cortisol production
- Chronic allergy (histamine release depletes adrenal reserves).
- Inability to tolerate bright light (also an indication of B vitamin need).
- Low blood pressure
- Cortisol decreased in a.m.
- Ligament instability/weakness
- Intolerance to foods high in potassium (bananas, oranges, beans, etc).

Dietary Suggestions

Adrenal Hyperfunction:

- Eliminate all refined foods, alcohol, processed foods, dairy, gluten and caffeine. If the patient is overweight, eliminate fruit juice, high carbohydrate foods. If renal function is not compromised; increase protein and limit, total daily carbohydrate intake to not more than 60 grams.
- Increase raw and fresh foods. Foods high in potassium should be increased and foods high in sodium should be decreased.
- Drink and cook only with pure water. (no well, city or water containing fluoride or chlorine)
- Eliminate all hydrogenated fats and oils.

Adrenal Hypofunction

- Eliminate all refined foods, alcohol, dairy (except butter), gluten and caffeine. If the patient is overweight and renal function is not compromised; increase total protein and insure total daily carbohydrate intake does not exceed 60 grams.
- Increase protein and raw vegetables. Vegetables high in sodium such as green beans, celery, zucchini, onions and tomatoes are helpful.
- Eliminate all hydrogenated fats and oils. Use only fresh and raw oils.
- Drink and cook only with pure water. (no well, city or water containing fluoride or chlorine)

Adrenal Dysfunction

Patient Questions

Adrenal Hyper Function:

- Blood pressure increased
- Headaches, especially in females
- Hot flashes
- Hair growth on face or body (females)
- Masculine tendencies (females)

Adrenal Hypo Function:

- Blood pressure low
- Crave salt
- Chronic fatigue/get drowsy
- Afternoon yawning
- Weakness/dizziness
- Weakness after colds/slow recovery
- Circulator poor
- Muscular and nervous exhaustion
- Subject to colds, asthma, bronchitis (respiratory disorders)
- Allergies and/or hives
- Difficulty maintaining manipulative correction
- Arthritic tendencies
- Nails weak, ridges
- Perspire easily
- Slow starter in the morning
- Afternoon headaches

Related Blood Tests

Adrenal Hyperfunction

- Aldosterone increased
- Sodium and Chloride normal to increased
- Increased CO₂
- Decreased Potassium
- Plasma and Salivary cortisol increased
- Plasma Renin decreased
- Urinary 17 Ketosteroids increased
- DHEA generally normal to increased

Note: Most Common are Decrease Potassium and Increased Cortisol.

Adrenal Hypofunction

- Aldosterone decreased
- Androgens decreased
- Bun decreased
- Calcium increased
- Decreased CO₂
- DHEA generally normal
- Glucose decreased
- Glucocorticoids decreased
- Sodium and Chloride normal to decreased
- Magnesium increased
- Potassium increased
- Urinary and/or salivary cortisol decreased
- Plasma Renin increased
- Urinary 17 Ketosteroids decreased

Note: Most Common are Increased Potassium, Decreased Cortisol and Decreased CO₂.

Raglands Postural Hypotension Test

Procedure:

- Instruct the patient to lay supine on the treatment table.
- Place the blood pressure cuff on the arm of choice and determine the systolic pressure.
- Pump up the cuff again 15mm/Hg higher than the supine systolic pressure and while supporting their arm, instruct them to stand up quickly.
- Immediately release the valve so that you can determine the standing systolic pressure within 5 seconds of patient rising.

Results:

- **Excellent:** 4-10 point rise in systolic pressure upon standing.
- **Fair:** Systolic pressure remains the same.
- **Poor:** Systolic pressure drops up to 10 points.
- **Failure:** Systolic pressure drops between 10 and 20 points.
- **Exhaustion:** Systolic pressure drops over 20 points.

Important: Poor adrenal function could cause the patient to become dizzy when standing up quickly. They may need assistance standing.

Test may also be done sitting to standing, however, the blood pressure change will be less than supine to standing.

The systolic pressure must be assessed within 5 seconds of patient standing or the systolic pressure will change before you can measure.

Paradoxical Pupillary Response

Procedure:

- Darken the room and wait 15 seconds.
- Instruct the patient to look at a fixed point and not to blink.
- Come in from the outside of the eye and direct the pen light at the pupil at approximately 45 degree angle. Hold the light 6-12 inches from the patients eye depending on the intensity of the light.
- Hold for 20 second observing the reaction of the pupil.

Results:

- **Excellent:** pupil constricts and holds tight for 20 seconds without pulsing.
- **Fair:** Pupil holds but pulses after 10 seconds.
- **Poor:** Pupil pulses and becomes larger after 5-10 seconds.
- **Failure:** Pupil pulses and becomes gradually larger in the first 10 seconds.
- **Exhaustion:** Pupil immediately becomes larger or fails to constrict.

Important:

Rule out drugs and neurological dysfunction.

Adrenal Hyperfunction Supplementation

Primary Supplemental Support:

1. **ADHS** - 2-3 tablets twice a day in the a.m. and at noon.
2. **Cytozyme PT/HPT** - 2-4 tablets twice a day in the a.m. and at noon.
3. **Glucobalance** - 2-3 capsules, with each meal.
4. **Optimal EFA's** - 2 capsules, with each meal.
5. **DeStress** - 1-2 capsules during the day and 1-2 at bedtime.

Other Considerations:

1. If the patient has multiple endocrine dysfunction or is debilitated add **Neonatal Multi Gland**. 3 tablets with each meal.
2. Most patients with adrenal cortical hyperfunction are sympathetic dominant indicating a need for **Bio CMP**, 2-3 tablets twice a day.
3. **Mn Zyme** - 2-3 daily.
4. **Biocetol** - 2 tablets 3 times a day.
5. **21st Century Homeopathic for Acute Stress** - 1 capful, 4 times a day for a week then reduce to 1 capful daily.
6. **Phosphatidylserine** - 4 capsules at bedtime if the P.M. cortisol is increased.
7. High blood pressure is common with adrenal hyperfunction, use **Vasculost** 3-5 capsules twice a day and **Magnesium Orotate**, start with 6 capsules at bedtime increase by 1 each night until loose stool in the morning.
8. Inability to tolerate foods high in sodium or chloride is a common finding.

Adrenal Hypofunction Supplementation

Primary Supplemental Support:

1. **Cytozyme AD** - 2-3 tablets, 3 times a day with meals or **ADB5-Plus** 2 tablets in the a.m. and 2 at noon. Note: Use **ADB5-Plus** if the systolic pressure drops more than a 10mm from recumbent to standing, serum potassium is greater than 4.8, positive pupil response or systolic blood pressure is below 105.
2. **Bio-Glycozyme Forte** - 2 tablets 3 times a day between meals and 2 hours after supper. If the patient is unable to take this supplement on an empty stomach take 1 capsule of **Betaine Plus HP** in the middle of each meal.
3. **Bioctasol** - 2 tablets, 3 times a day with meals.
4. **Celtic Sea Salt** - 1 teaspoon full daily. This is important if the patients serum chloride is below 100mmol/L. This is also an indication of hypochlorhydria.

Other Considerations:

1. **Bio 3B-G** - 3 tablets, 3 times a day between meals. This should be considered as primary support if the patient has low blood pressure or the systolic drops more than 10mm (Ragland test).
2. **Phosphatidylcholine** - 2 capsules with each meal.
3. **B-Vital** - 1 capsule, twice a day.
4. **21st Century Homeopathic for Chronic Stress** - 1 capful, 4 times a day for 2 weeks then 1 capful twice a day.
5. **B-6 Phosphate** - 3 tablets with each meal.
6. If DHEA is required use **7-Keto-Zyme** 1-3 tablets daily.

Soup for Adrenal Hypofunction

1- 28 oz can of Tomato Puree

1- 28 oz can of crushed or whole Tomatoes

2- Cups of water

1- Cup of green beans

1- Cup of chopped celery with leaves

1- Cup of zucchini chopped

1/2 - Cup of onion chopped

1/2 - Cup of carrots chopped

1/2- Tsp of paprika

Salt with sea salt and pepper to taste.

Bring to boil, reduce heat until vegetables are tender.

Optional: Add 1 pound of meat of choice. Cook meat thoroughly then add the above ingredients.

Product Information

ADB5-PLUS – Two tablets contain 75 mg of vitamin C, 5 mg of B-1, B-6 and B-2 (phosphorylated forms), 25 mg of niacinamide, 200 mcg of folic acid, 6 mcg of vitamin B-12, 75 mg of pantothenic acid, 500 mcg of iron, 35 mg of magnesium malate, 2.5 mg of zinc, 1 mg of manganese and a 635 mg proprietary blend of malic acid, porcine adrenal concentrate, citrus bioflavonoids, choline, SOD and catalase, N-acetyl-cysteine, ovine pituitary/hypothalamus, bovine parotid, tyrosine (mushroom source), Rhodiola rosea and copper (less than 2 percent of the blend). Use with adrenal dysfunction (primarily hypofunction), postural hypotension, ligament laxity, reactive hypoglycemia and low blood pressure. 2 tablets in the a.m. and 2 at noon. Product contains a small amount of iron and should be kept out of the reach of children.

A.D.H.S. - Product contains vitamins, minerals and herbs (product contains no glandular material), known to support normal adrenal function. Preliminary studies using the salivary adrenal stress test (ASI) indicate that **A.D.H.S.** is often effective as a supplement to increase DHEA while helping to normalize an increased or decreased cortisol level. Consider **A.D.H.S.** with adrenal cortical hyperfunction (increased cortisol), hypertension due to adrenal hyperfunction, dysinsulinism (Syndrome-X/Metabolic Syndrome) and other cases where cortical hyperfunction is known or suspected. Suggest 2-3 tablets, twice a day with breakfast and lunch. Pregnant or lactating women should not use this product.

B6 PHOSPHATE - Biologically active form of vitamin B-6 (16 mg per tablet) in a vegetable culture base. Use with carpal tunnel syndrome, joint pain, trigger finger (use with raw pecans), homocystinuria, sensitivity to bright light, burning or tingling in the extremities, inability to recall dreams, decreased liver enzymes, increased C-reactive protein, vitamin B-6 anemia (normal serum iron and/or ferritin with a decreased MCV/MCH) and sensitivity to MSG. Vitamin B-6 is a synergist to magnesium and zinc. 2-4 tablets, 3 times a day with meals. Do not exceed 25 mg per day during pregnancy/lactation.

BIO-3B-G - A multiple B vitamin containing the phosphorylated forms of B-1, B-2 and B-6. Product is the same as **Bio-B 100**, except this product is three times higher in phosphorylated thiamine. Consider **Bio-3B-G**, at 2-4 tablets, 3 times a day where increased thiamine is required (low blood pressure, psychological stress, hypoglycemia, adrenal cortical hypofunction, severe fatigue, etc.). When the need for thiamine is high dose at 2 tablets per waking hour for 10-20 days.

BIOCTASOL FORTE - Each tablet contains 6000 micrograms of octacosanol from rice source. Allows increased oxygen utilization by muscle and nerve tissue. Use with neuro-muscular degeneration and patients who fail to maintain their manipulative treatment. Product should also be considered for females who desire to become pregnant and have a history of spontaneous abortion. 6 tablets daily.

BIO-GLYCOZYME FORTE - A broad-spectrum product designed to support reactive hypoglycemia, adrenal fatigue, general fatigue, stress, highly refined diets and carbohydrate sensitivity. Contains phosphorylated forms of B-1, B-2 and B-6, neonatal bovine and ovine glandular and organ components, chromium, vanadium, zinc, magnesium and other accessory nutrients. 2-3 tablets, 3 times a day at 10:00 a.m., 3:00 p.m. and 2 hours after supper. If the patient is able to fall asleep but, cannot remain asleep, add 3 tablets just before bedtime. If use of the product on an empty stomach causes distress, dose with meals with 1 **Betaine Plus-HP**.

b-VITAL - Each capsule contains 750 mg of Peruvian Maca root and 50 mg of Velvet Deer Antler (from live American elk.) **B-Vital** should be considered as adjunctive supplemental support with lack of libido (male and female), reduced testosterone, menopausal hot flashes and lack of stamina. 1 capsule, twice per day. Note: **b-Vital** is not recommended for children, during pregnancy/lactation, females with a history of breast cancer, males with increased PSA or a history of prostate cancer.

CYTOZYME-AD - Source of neonatal bovine adrenal. Use with chronic fatigue, hypoglycemia, craving for salt, lowered resistance from long-term illness, flu, colds, hypotension (use with **Bio-Glycozyme Forte** and **Bio-D Mulsion Forte**), asthma, inflammation, allergy/sensitivity to foods or environmental toxins, lack of ligament strength (patient is unable to hold a manipulative treatment), ridges in the fingernails and patients who are unable to work under pressure or become enraged easily. 1-4 tablets, 3 times a day with meals. With severe hypotension add **Bio-3B-G** at 2 tablets per waking hour for 10 days then 9 tablets daily. If the need for **Cytozyme-AD** exceeds 9 tablets per day, consider using **ADB-5 Plus** in lieu of **Cytozyme-AD**.

DE-STRESS – Each capsule supplies 150 mg of a bioactive peptide derived from milk, having anxiolytic activity. **De-Stress** can be used in any case where psychological stress, insomnia or anxiety are present. 1 capsule at bedtime and 1 capsule during the day if needed for periods of high stress. Human studies indicate **De-Stress** has no known side effects and will generally work within 24-48 hours after the initial dose.

GLUCOBALANCE - A vitamin and mineral combination formulated by Dr. Alan Gaby and Dr. Jonathan Wright. Excellent formula for insulin dependent diabetics, non-insulin dependent diabetics, elevated triglycerides with low HDL, carbohydrate sensitivity and dysinsulinism. 2-3 capsules, 3 times a day with meals. Note: With insulin dependent diabetics, insure the patient checks their blood sugar levels frequently as **Glucobalance** will often have a dramatic effect on insulin needs.

MAGNESIUM OROTATE – Each capsule contains 500 mg of magnesium orotate providing 32 mg of elemental magnesium. This product contains only U.S. manufactured orotate. Several citations from the literature indicate that magnesium orotate is an effective form of magnesium for recovery from heart attacks and heart surgery, for improved athletic performance, cardiovascular disease and elevated cholesterol. Dr. Hans Nieper (father of the orotates) also used magnesium orotate successful for M.S., renal failure from diabetes or hyper-tension, viral disease and blood clots. The magnesium Orotate (originally called vitamin B-13) used by Biotics Research is fully reacted, unlike most of the orotates marketed in the U.S. which are food-grade mixtures of orotic acid and inorganic magnesium salts that can cause mild liver toxicity. Dr. Nieper insisted that with most mineral carriers the carrier becomes trapped in the inner cell membranes and is not properly released. The fully reacted orotates, however pass through both the outer and inner cell membrane and only become metabolized when they reach the membranes within the cell. This allows a lower level of the elemental mineral to be used.

These statements are soundly plausible, but there is no peer literature supporting them. Ultimately the value of the Nieper's work on mineral transporters does not depend upon whether his theories and explanations were valid; it depends only upon whether the transporters work when you use them. Many users, past and present, are quite convinced that the lives and health of their patients have been rescued by this supplement and this alone justifies their use. With cardiac problems and M.S. magnesium orotate has performed exceptionally. Suggest dose is 4 capsules at bedtime, increasing nightly by one capsule to bowel tolerance.

PNEONATAL MULTI-GLAND – This is a broad-spectrum product containing both organ and gland support (contains pineal in addition to all of the other neonatal gland and organ concentrations). Use with chronic fatigue or illness, athletes under stress, for general physical or psychological stress and as a synergist to specific gland or organ therapy. 2-3 tablets, 3 times a day with meals.

OPTIMAL EFAs – Two capsules supply 280 mg of ALA, 159 mg of EPA, 105 mg of DHA, 112 mg of GLA and 204 mg of oleic acid. The fatty acids are derived from a unique blend of fish, flaxseed and borage oil. Use with inflammation, endocrine dysfunction, free radical problems, lipid/glycemic problems and highly refined diets. 2 to 4 capsules, 3 times a day.

HOSPHATIDYLCHOLINE - Each capsule supplies 430 mg of phosphatidyl choline and 36 mg of phosphatidyl inositol. Use with Alzheimer's, Parkinson's, senility, neuro-muscular disorders, synaptic dysfunction, elevated blood fats, fatty liver, gall bladder symptoms, gallstones, migraine headaches and adrenal hypofunction. 1-2 capsules, 3 times a day with meals.

PHOSPHATIDYLSERINE – Each capsule is standardized to contain 100 mg of Phosphatidylserine and also typically provides a 300 mg blend of phosphatidyl-inositol, soy phospholipids, phosphatidylcholine, phosphatidylethanolamine and glycerides. Consider this product with short-term memory loss, mood improvement, myelin sheath repair and for reducing cortisol production (adrenal hyperfunction). With adrenal cortical hyperfunction the product should be considered with **ADHS, GlucoBalance and Optimal EFAs**. With short-term memory loss it should be used with **RB-Zyme and Nuclezyme Forte**. 4-6 capsules twice a day.

VASCULOSIRT is a state of the art product containing vitamin A, D, B complex, magnesium, green tea extract, Co-Enzyme Q-10, Acetyl-L Carnitine, olive leaf extract, Quercetin, Phytolens, Lutein, Lycopene, Trans-Resveratol, R-Alpha Lipic Acid, vitamin K1 and vitamin K-2. Product should be considered for hypertension with **MAGNESIUM ORATATE** and as support for cardiac and arterial function. 3-5 capsules twice a day. Because of the vitamin K components, the product should not be used by patients who are on prescribed blood thinners. There is no question that both formulas are the premiere vascular support products available to the healing arts. 3-5 capsules twice a day. Note: Clinical feedback indicates that the initial dose should be 5 capsules twice a day, however after 30-45 days; the dose can be lowered to 3 capsules twice a day. Neither product is recommended during pregnancy or lactation.