

The NeuroTransmission

*Helping practitioners address chronic symptoms,
acute conditions, and practice effective wellness medicine.*

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Featured Author



Dennis Godby, NMD
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Andropause and the Neuro-Endocrine System

Dennis Godby, NMD

Andropause is a state of lowered “androgen” (male-type) hormone levels in aging men, DHEA, androstenedione and particularly testosterone. Andropause is often missed by both patients and physicians; it is usually much more gradual than its female counterpart, menopause. Because it has no significant event like the end of a menstrual cycle in women, andropause is less known and accepted as a medical reality. I believe that, socially, it is more acceptable, and even encouraged for women to talk about their menopausal symptoms, while for men, it is the exact opposite.

In addition to, or because of the above, men seek medical help far less than women. A few statistics below bears witness to this:

- *Men visit doctors 150% less than women.*
- A March 2000 survey by the Commonwealth Fund titled, “Out of Touch: American Men and the Health Care System,” found that 24 percent of men did not see a physician in the year prior to the survey -- three times the rate found for women (8 percent)
- The number of annual office visits to physicians for women (all ages) was 488 million in 2000 compared to 335 million for men in the same time period
- When men do seek care they are more likely than women to seek it at a clinic or emergency room.
- Men account for a third fewer hospital stays than women but take longer to recover once in a hospital.
- Suicide and violence-related deaths are four times as likely among men

Featured Author



Dr Godby currently enjoys a thriving practice in Sacramento, CA. In addition to holding a Doctorate of Naturopathic Medicine, Dr Godby has been trained in Functional Diagnostic Medicine and Exercise Physiology, and is author of *The Practical Guide to Overcoming Diabetes Naturally*.

Online Presentation

See Dr Godby's presentation on Andropause and the Neuro-Endocrine Connection online at www.Sanescos.net

To see a case study on men's health by Dr Godby, and to learn more about assessing your patients neuro-transmitter and hormone imbalances, call Sanesco today.

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What are androgens? Androgens are substances producing or stimulating masculine characteristics. They are involved in immune function, development and maintenance of muscle and bone, and erythropoiesis, i.e. bone marrow making RBCs. Levels of androgens can affect cardiovascular disease and emotional well-being. For example, low serum testosterone correlates with depression and accelerated arteriosclerosis. Some signs and symptoms of lowered androgen levels and function are:

- Body fat increase, especially abdominal
- Concentration difficulty
- Erectile dysfunction
- Libido decrease and reduced sexual performance
- Ambition and work performance decreases
- Memory loss
- Mood disturbances, including depression, fatigue, irritability and loss of stress tolerance
- Muscle size and strength decrease, and endurance decreases
- Osteoporosis
- Blood glucose elevation and insulin resistance
- Restlessness and sleep difficulties
- Lack of energy
- Declining physical coordination and agility
- Cognitive decline (memory and concentration)
- Loss of self-esteem and altered states of well-being
- Skin changes (loose skin/wrinkles)

Testosterone (T) peaks in early to mid 20s, then begins a slow average annual decline of: total T by 1.6%, free T by 2%, and bioavailable testosterone by 2.5%. Sex hormone-binding globulin (SHBG) rises roughly 1.6% per year. After age 50, 50% of men are considered hypogonadal - based on levels of bioavailable testosterone.

Testosterone is further metabolized to: DHT or Estradiol. DHT is metabolized by the enzyme 5-alpha-reductase, and is considered by some to be responsible for male-pattern baldness and prostatic hypertrophy in genetically susceptible men. Estradiol is metabolized via the enzyme aromatase. 25% of estrogens are from testicles, while 75% are produced from adipose, brain and liver.

About 98% of T is bound to plasma proteins & is unavailable. About 2% of T is free, and represents almost all of its biologic activity. Of the bound T, 40% is tightly bound to SHBG, and the remainder is weakly bound to albumin. Bioavailable is free T plus that which is bound to albumin. Aging increases the amount of T that binds to SHBG. As T levels fall, the liver is stimulated to increase SHBG, estrogens will also increase SHBG, increasing total serum T to normal range, but in actuality, a relative deficiency of bioavailable T often occurs.

Higher estrogen levels may, at times, be beneficial for menopausal women, but excess in andropausal men may be disastrous. Common causes of elevated estrogen in men are: stress and psychological factors, obesity, pharmaceutical drugs, alcohol consumption, increasing insulin resistance, liver function, and zinc deficiency.

Progesterone (P) is mistakenly considered a “female hormone.” It is also, very much, a hormone essential to men because P increases core body temperature. Amy Terlisner, NMD, says to make sure to test P in patients with low body temperatures. P reduces spasms and relaxes smooth musculature of the bronchi, and thus is an effective adjunct treatment for asthma and sleep apnea. It aids in the prevention of osteoporosis by stimulating osteoblasts and is neuroprotective by aiding synaptic functioning and myelination. Currently, P therapy is being studied for MS, brain trauma, epilepsy and Alzheimer’s. It reduces gall bladder activity by relaxing smooth muscle and opposes the effects of estrogen. Dr. John Lee reported that those men who applied P cream to their wives found that their symptoms of prostatism, such as urinary urgency and frequency, decreased considerably. Other men reported drop in PSAs and no progression of their prostate cancer. P works to restore normal size to prostate gland by inhibiting the effects of estrogen, a prostate cell proliferator. P also inhibits 5-alpha reductase, which converts T to a more potent DHT. 5-alpha reductase drugs are often used in BPH, prostate CA, and baldness, but they have serious side effects, unlike P.

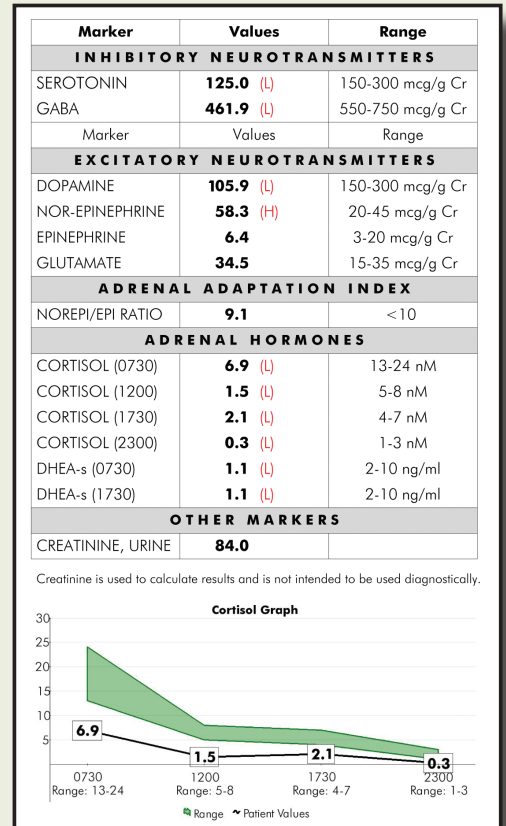
The balance between hormones and neurotransmitters is also vital to andropause treatment protocols.

I use Sanesco’s (NeuroLab) HPA profile test to see the balance, or imbalance, in the neuro-endocrine system. Dopamine, which is a neurotransmitter that is associated with focus, energy, libido, drive, and positive self-perception, is a testosterone and GH agonist. When levels are low, products with dopamine precursors, such as Sanesco’s Procite-D and Contegra, can help to boost that pathway and improve focus and energy. It is also helpful to look at serotonin and GABA levels. Serotonin is involved with mood and often works with GABA to keep a good level of calm in the body. Serotonin is an estrogen agonist (and in some part testosterone) while GABA is linked to Progesterone. When these two neurotransmitters are low, patients can feel depressed, anxious, or have trouble sleeping so support is often very helpful. Prolent, with 5HTP, is a great product to rebuild serotonin, and Lentra supports GABA function.

I also find that adrenal function plays a role in men’s health concerns. Cortisol provides energy and DHEA is a precursor to the sex hormones. Evaluating patient levels can put more pieces of the puzzle together. It is fairly common to see lower cortisol and DHEA levels in andropausal men. These lower levels can affect neurotransmitter and androgen stores, therefore making sense to provide support here if needed.

My typical workup for an andropausal patient includes:

- Dr. Weatherby’s “Basic Panel”: Triglycerides, Cholesterol: HDL, LDL and Total Cholesterol, Cholesterol/HDL Ratio, GGT(P), LD(H), Phosphate, Uric Acid, Total iron/TIBC, % Saturation, Glucose, BUN, Creatinine, BUN/Creatinine Ratio, Sodium, Chloride, Potassium, CO2, Calcium, Total Protein, Albumin, Globulin, Albumin/Globulin Ratio, Total bilirubin, Alkaline Phosphatase, AST, ALT, Sed Rate (ESR), WBC count, Red Blood Cell Count, Hemoglobin, Hematocrit, MCV, MCH, MCHC, RDW, Platelet Count, Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils, Ferritin, T3 Total, T4 Total, TSH
- Sanesco’s (NeuroLab) HPA profile: 6 Key urinary neurotransmitters (Serotonin, Glutamate, Epinephrine, Norepinephrine, GABA, Dopamine), saliva Cortisol (x4), DHEA-s (x2)
- Vitamin D 25 OH (60-80), Serum Testosterone (Free and Total) or Testosterone (Saliva), Saliva Progesterone and Estradiol, Cardio CRP, Fibrinogen, Homocysteine (less than 7), PSA (Free and Total), Fasting insulin (less than 8), 2 hour post-prandial, glucose (less than 140), Glucose-Insulin Tolerance Test (GITT), Hemoglobin A1C, IGF-1, Prolactin, IGFBP-3Lipoprotein (a), SHBG, LH, FSH, Urinalysis



In order to treat andropause, I carefully review a patient's history and the results from their tests. I develop a rebuilding and rebalancing protocol on an individual basis. I look at the ABC's of male vitality (listed in my webinar presentation), the possible interactions with any pharmaceuticals or hormones the patient is taking, and then I think about testosterone replacement. There are a few options for delivery of the bioidentical hormone:

- Injections: Most common, but the worst, according to Shippen and Fryer because it raises T far too abruptly, imitating the body's own pattern, often leading to a rebound effect in the form of increased estrogen levels.
- Lozenges: Excellent method to increase T, except for men who don't want to be bothered 3 times in a day. It mimics well the natural pulsatile release of T.
- Patches: Good for men who only need a moderate boost in T, up to 500-600 ng/dl range. Downside is that some men get rashes from the adhesive patch on the skin.
- Gel and creams: Convenient and highly effective. Both are rapidly absorbed thru skin. Best to rotate (so as not to develop extra hairiness in one area) and use twice a day - morning and night. If using T for increasing sexual function, can rub the cream (not the gel or it will sting) on the head or shaft of the penis or on the scrotum.
- Pellets: See Shippen and Fryer's book: Testosterone Syndrome: The Critical Factor for Energy, Health, & Sexuality – Reversing the Male Andropause for more details.

It is critically important to get the word out to male patients about male andropause.

Since natural healthcare practitioners overwhelmingly see more female than male patients, and males are much less likely to seek medical help, thereby delaying diagnosis and treatment, resulting in poor health outcomes -

ask your female patients to talk with their husbands, brothers, dads, and all the men in their lives about the importance of seeking preventative healthcare to avoid premature aging and death.

- Dennis Godby, NMD



About Sanesco International

Sanesco International is a medical company with expertise in assessing and addressing neuro-hormonal imbalances affecting HPA-T axis function. Since inception in 2004, the Sanesco team remains committed to providing an effective clinical model with practical solutions to help practitioners address their patients' chronic symptoms, acute conditions, and to practice preventive medicine. ***Contact one of our Practice Building Specialists today to learn how you can find more success with addressing your patients chronic symptoms and conditions.***

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