

ANDROGEN ELITE

(dried urine)

The aging male experiences a decrease in testosterone at a rate of 10% per decade from the age of 30. This reduction of testosterone and other androgens experienced as a consequence of the aging process has been named andropause or androgen deficiency of the aging male (ADAM). Symptoms associated with ADAM can be associated with impaired 5-alpha reductase or aromatase activity, enzymes responsible for conversion of Testosterone to Dihydrotestosterone (DHT) or estrogens. Symptoms of ADAM consist of somatic, sexual and psychological changes including reduced muscle mass, reduced BMD, increased cardiovascular disease, lowered libido, depression, increased Alzheimer's disease and a general decrease in well-being. This test provides a focused overview of the male, some female hormones, and its metabolites: Estradiol, Estrone, Estriol, 2OHE1, 16 α OHE1; Pregnanediol, Allopregnanolone, Testosterone, Epi-Testosterone, 5 α -dihydrotestosterone, Androstenedione, DHEA, 5 α ,3 α -Androstanediol, Cortisol, Cortisone, Tetrahydrocortisol, Tetrahydrocortisone.

Hormones and Aging

Hormones are powerful molecules that are essential for life. Imbalances of hormones affects other organ systems like the adrenals, thyroid and nervous system. What many people fail to recognise however, is that partial deficiencies also have a wide reaching negative effect on the human body. This is understandable however, when a hormone's mechanism of action is understood.

Aging is one process which is associated with hormone decline. In the past it was thought that this reduction was a normal consequence of the aging process. However, more recently an alternative theory has been proposed; that hormones do not decrease because we age, but rather we age because our hormones decrease i.e. that a reduction in hormonal cellular, genetic and protein control, is the physiological cause of the deterioration of the body which leads to the aging process. It therefore follows that treating hormonal deficiencies (overt, moderate or mild) will prevent or ameliorate disorders associated with the aging process. The treatment of osteoporosis with testosterone and estrogen in men and women is just one example of this. In addition, ensuring that hormone levels are optimal will enhance quality of life in the aging population by improving mood, memory, assertiveness, sexual function and muscle mass. Assessing and diagnosing these changes are important to decrease unnecessary suffering and prevent degenerative diseases.

SYMPTOMS AND CONDITIONS ASSOCIATED WITH HORMONE IMBALANCE

PMS	Menopause
Fertility issues	Adrenal stress
Endometriosis	PCOS
Uterine fibroids	Fibrocystic breasts
Hormonal cancers	Osteoporosis
Fatigue	Insomnia

Androgen Deficiency in Aging Males (ADAM):

The aging male experiences a decrease in testosterone at a rate of 10% per decade from the age of 30. In addition, sex hormone binding globulin (SHBG) increases during this time-frame reducing the amount of free 'bioavailable' testosterone available to the body. To make matters worse, estradiol often rises during this process, leading to gynecomastia, increased body fat and increased prostate cancer risk. This reduction of testosterone and other androgens experienced as a consequence of the aging process has been named andropause. In contrast to women, the decline in hormone levels in men is gradual, partial, and is a slow progressive process without steps. Furthermore, the age and testosterone level at which each individual experiences clinical symptoms can be highly variable. Therefore alternative names have been suggested for this disorder including androgen deficiency in aging males (ADAM), partial androgen deficiency in aging males (PADAM) and symptomatic androgen deficiency in aging males (SADAM).

SYMPTOMS AND CONDITIONS ASSOCIATED WITH ANDROGEN DEFICIENCY IN AGING MALES (ADAM)

Alzheimer's disease	Thinning Skin
Hypogonadism	Hypopituitarism
Bone loss	Low libido
Depression and other mood disorders	Loss of body hair
Dementia	Myofascial pain
Fatigue	Obesity
Fibromyalgia	Poor memory
Heart palpitations	Low muscle tone & muscle aches
Erectile dysfunction	General aches & pains
Diminished sense of wellbeing	Adrenal fatigue

Signs and Symptoms

Decreased androgen levels contribute to increased fat mass and reduced bone mineral density, muscle mass and muscle strength. Erectile dysfunction and lowered libido are also associated with ADAM. Another major sign of lowered androgen levels include psychological changes including reduced assertiveness, cognition, memory, mood, self-esteem, well-being and energy. Lowered testosterone and other androgens may also increase the risk of age-related conditions such as Alzheimer's disease, cardiovascular disease and osteoporosis. Testosterone treatment however may reverse these changes increasing lean body mass, muscle strength, bone mineral density, libido and mood, whilst reducing fat mass. Therefore diagnosing and treating androgen deficiency is vital for improving quality of life and reducing age-related health decline in the aging male population.

Urinary Hormone Testing

Urine testing has the benefit over serum testing that it detects predominantly unbound, active hormones, which are biologically available to their receptors in target tissues. It has a convenient, painless collection procedure that can be performed in the privacy of the home. Urine testing is a stress free, no needles collection that measures metabolic breakdown of hormones. This comprehensive test identifies androgens, female hormones, adrenal hormones and thyroid hormones.

ADVANTAGES OF URINARY HORMONE TESTING

Measures the free, bioavailable fraction of hormones

Measures metabolites of hormones providing a detailed metabolism of hormones

Do-it-yourself at home collection offers ease of collection for patient

Dried urine test strips correlate with spot or 24 hour urine collection

Dried urine test strips can assess diurnal patterns

ANDROGEN ELITE (dried urine) [Test Code: 1504]

- ❖ Estradiol, Estrone, Estriol, 2OHE2, 2OHE1, 4OHE2, 4OHE1, 16 α OHE1, 2MeOE2, 2MeOE1, 4MeOE2, 4MeOE1; Pregnanediol, Allopregnanolone, Allopregnanediol, 3 α -Dihydroprogesterone, 20 α -Dihydroprogesterone, Dexocyclocosterone, Corticosterone; Testosterone, Epi-Testosterone, 5 α -DHT, Androstenedione, DHEA, 5 α ,3 α -Androstanediol; Total Cortisol, Free Cortisol (x4), Total Cortisone, Free Cortisone (x4), Tetrahydrocortisol, Tetrahydrocortisone; Melatonin (x4)

Other male hormone tests available

- **Male Hormone Profile – Basic (saliva) [1007]:** DHEAs, E1, E2, Testosterone
- **Male Hormone Profile – Extensive (saliva) [1008]:** DHEAs, E1, E2, Testosterone, DHT, Androstenedione
- **Androgen Profile (urine) [1206]:** Cortisol, DHEA, 17-ketosteroids, Total Hydroxy corticoids, ratios, Testosterone, Allo-tetrahydrocortisol, Tetrahydrocortisol, Tetrahydrocortisone, Tetrahydrodeoxycortisol, Aldosterone, Androsterone, Etiocholanolone, 11OH-androsterone, 11OH-etiocholanolone, 11-ketoetiocholanolone, 11-ketoandrosterone, Pregnanetriol (Pregnenolone), DHT metabolite
- **Male Hormone Profile – Basic (urine) [1215]:** T4, T3, T4/T3 ratios, Cortisol, DHEA, Testosterone, E1, E2
- **Male Hormone Profile – Extensive (urine) [1216]:** T4, T3, T4/T3 ratios, Cortisol, DHEA, Testosterone, E1, E2; 17-ketosteroids, Total Hydroxy corticoids, ratios, Allo-tetrahydrocortisol, Tetrahydrocortisol, Progesterone, Tetrahydrocortisone, Tetrahydrodeoxycortisol, Aldosterone, Androsterone, Etiocholanolone, 11OH-androsterone, 11OH-etiocholanolone, 11-ketoetiocholanone, 11-ketoandrosterone, Pregnanetriol (Pregnenolone), DHT metabolite, 2OHE1, 16 α OHE1, 2:16 ratio, 4OHE1, Melatonin, Na, Ca, P, K, Mg, Cr
- **Male Hormone Blood Spot – Basic [1404]:** E2, Testosterone, SHBG, DHEAS, Cortisol, PSA
- **Male Hormone Blood Spot – Extensive [1405]:** E2, Testosterone, SHBG, DHEAS, Cortisol, PSA; TSH, ft4, ft3, Thyroid peroxidase antibodies
- **Androgen Elite Dried Urine [1504]:** E2, E1, E3, 2OHE1, 16 α OHE1; Pregnanediol, Allopregnanolone; Testosterone, Epi-Testosterone, 5 α -DHT, Androstenedione, DHEA, 5 α ,3 α -Androstanediol; Total Cortisol, Total Cortisone, Tetrahydrocortisol, Tetrahydrocortisone

How to order a test kit:

To order a test kit simply request the test name or test code on a NutriPATH request form and have the patient phone **NutriPATH Customer Service on 1300 688 522.**

