

# MALE HORMONE PROFILE - Basic (blood spot)

*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 wellbeing.

## Hormones and Aging

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 & CONDITIONS ASSOCIATED WITH ANDROGEN DEFICIENCY

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

## 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. Diagnosing and treating androgen deficiency is vital for improving quality of life and reducing age-related health decline in the aging male population.

## Blood Spot Testing

Blood spot is derived from capillary blood obtained by pricking the skin to draw drops of blood.

### ADVANTAGES OF BLOOD SPOT TESTING

No phlebotomist or visit to blood collection centre required

Collection times can be optimised, either at various times in a day or frequently

Safe and ease of collection

Finger prick and can be performed in the privacy of patient's home or in clinic

Measures the same hormone as standard blood test and results correlate with standard tests.

## MALE HORMONE – BASIC (blood spot) [Test code: 1404]

❖ E2, Testosterone, SHBG, DHEAS, Cortisol, PSA

## 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
- **Male Hormone Profile (serum) [1110]:** DHEAs, E2, E1, SHBG, Testosterone, calc. free Testosterone
- **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, 20HE1, 16 $\alpha$ OHE1, 2:16 ratio, 4OHE1, Melatonin, Na, Ca, P, K, Mg, Cr
- **Adrenals & Male Hormone Blood spot [1415]:** DHEAs, Cortisol x4; E2, Testosterone, SHBG, PSA
- **Androgen Elite Dried Urine [1504]:** E2, E1, E3, 20HE1, 16 $\alpha$ OHE1; Pregnanediol, Allopregnanolone; Testosterone, Epi-Testosterone, 5 $\alpha$ -DHT, Androstenedione, DHEA, 5 $\alpha$ ,3 $\alpha$ -Androstanediol; Total Cortisol, Total Cortisone, Tetrahydrocortisol, Tetrahydrocortisone

## How to order a test kit:

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

