What we test and what it tells you

Using a saliva sample, the regular MHP panel measures seven hormones: DHEA, androstenedione, testosterone, dihydrotestosterone, estrone, estradiol and progesterone. The expanded panel measures these seven hormones plus FSH and LH. The hormone levels in saliva reflect the active tissue exposure, while blood contains mostly protein- bound hormones, whose active levels can only be estimated at best. Urine contains both the active hormones and numerous metabolites and can only provide a gross estimate of hormone production over time. Active fraction measurements from saliva are superior to blood and urine for use in diagnosis and treatment.

This test is for you if you are–

Middle-aged man and with any of these conditions:

- Impaired libido
- Erectile dysfunction
- Baldness and/or extremity hair thinning
- Fat accumulation around the waist
- Urinary problems such as pain, frequency or urgency—or interrupted stream
- Changes in sleeping habits
- Lack of enthusiasm for life—Depression
- Increase in bad cholesterol—decrease in good cholesterol
- Osteoporosis

Young man and with any of these conditions:

- Impaired libido
- Erectile dysfunction
- Early baldness
- Inability to lose weight

Woman of any age with any of these conditions:

- Amenorrhea
- Excess facial/body hair
- Irregualr bleeding
- Hair thinning, male type baldness

How do you benefit?

There are five distinct ways that you can benefit from using the saliva tests in the Male Hormone Panel:

- They are affordable and less expensive than blood or urine tests. You save $250 - $300 on seven hormones.
- The collection procedure spares you from the biohazards and pain of venipunctures.
- Results are more clinically reflective of your hormone status and needs.
- Results can lead to an individualized and customized treatment plan using natural hormones.
- You will minimize overdosing and underdosing. This will ensure that you use only the proper hormones in the appropriate amounts. With salivary hormone testing, guesswork is minimized.

Use the Male Hormone Panel to help restore well-being, vitality and passion for life.

Taking hormones without an evaluation of the actual need for specific hormones entails risks that are both serious and unnecessary.

With two additional tests for LH and FSH, our expanded Male Hormone Panel can accurately identify the origin of the most common male hormone problems.

Major Accreditation
Diagnos-Techs™ maintains superior test quality and accuracy with a stringent daily QA program and is registered with CLIA, licensed by the Washington State Department of Health, and accredited by the Joint Commission.

Licensure and Proficiencies
Also accredited and licensed by the State of Washington (License No. MTS-0327), subject to the Clinical Laboratory Improvement Act of 2003 (CLIA-2003) certification. Our Federal CLIA Number is 50D0630141. External proficiency testing obtained from the College of American Pathologists, American Proficiency Institute and American Association of BioAnalysts.

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DiagnosTechs™
THE LEADING LAB IN SALIVA TESTING SINCE 1989

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For more information, please contact your healthcare provider.

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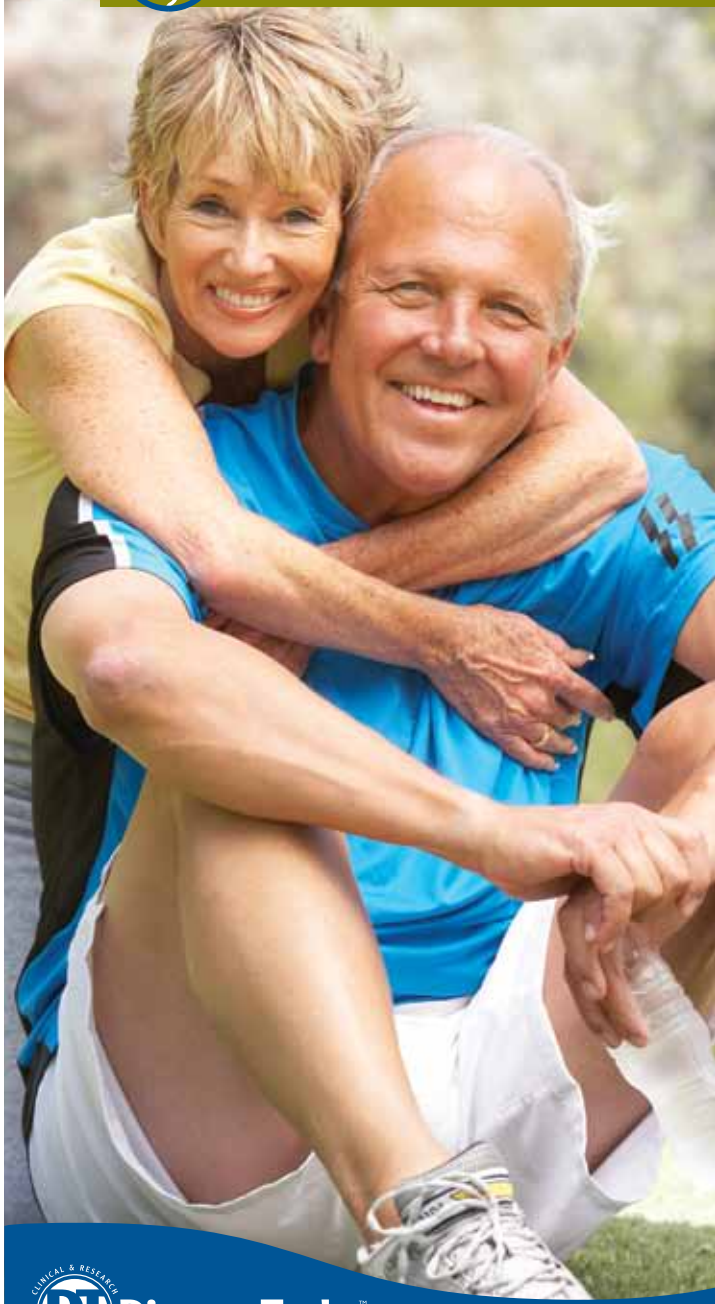
Patient Information

Male Hormone Panel™

The Science of Laboratory Medicine



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Male Hormone Panel™

Historically, age-related male hormone changes have not been considered problematic, because fertility in men persists until an advanced age. In contrast, women undergo ovarian function failure and require multiple hormone replacements. More careful evaluation in males, however, shows progressive age-related changes, including:

- Decreased muscle mass and strength.
- Decreased vigor or low energy
- Decreased libido
- Insomnia
- Nervousness and depression
- Hair loss

These changes usually begin in a man's forties and fifties and point towards hormone imbalances and deficiencies which may be considered the male equivalent of menopause, which is called andropause.

What you can do about male hormone imbalance

Optimal health is dependent on a balance of hormones, not just a single hormone. Currently, men with low androgen hormones can benefit from hormone replacement therapy. Men with imbalances in their levels of androgen to estrogen and progesterone can also benefit from hormone supplements.

Supplemental hormones can be given by mouth, injection, skin patch or implant. Androgen supplementation, in states of deficit, improves alertness and produces a feeling of well-being, with a reduction in abdominal fat and enhanced lean body mass.

Testosterone production in males is mainly a testicular function. The pituitary sex hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH) stimulate and regulate this function. Specifically, LH stimulates testosterone production in the testicles. This process is under negative feedback, meaning that testosterone levels regulate LH secretion. FSH and testosterone stimulate sperm production.

Why measure male hormones?

Measurements of hormones can be used in two general ways.

- To estimate the body's own production as a *baseline* test.
- To measure levels of hormones after supplementation in *therapeutic monitoring.*

Baseline measurements show normal and abnormal levels of six distinct hormones, shown in the boxes in Diagram 1. If the levels are too low, too high or hormone ratios are outside of expected limits, an objective treatment plan can be developed for the patient. Symptoms are not a substitute for measuring hormone levels, because many symptoms may involve non-hormonal factors.

Using appropriate tests for monitoring hormone therapy is crucial in establishing the appropriate dosing regimen. This reduces the chance of undesirable side effects and maximizes beneficial effects. For example, excessive use of androgens (testosterone, androstenedione, DHEA and testosterone derivatives) can activate subclinical prostatic tumors which are androgen-dependent. Monitoring is especially important in older males. By the age of 70, at least 50% of men have subclinical prostate cancer. These individuals are especially susceptible to growth stimulation by androgens.

The roles of the seven tested hormones are highlighted in the following descriptions of each:

DHEA - Is the precursor for both male and female hormones—and anti-stress hormone produced by the adrenal glands. Unmonitored intake can easily alter the delicate balance between male and female hormones.

Androstenedione - Is a weak (androgen) and a precursor to both male and female hormones. Unmonitored intake in men can cause excessive female hormone production with minimal male hormone production. In women, unmonitored intake usually causes excess male hormone production with body and facial hair stimulation.

Testosterone - Is the main testicular androgen and is the precursor to the highly potent dihydrotestosterone male hormone. Excessive amounts of testosterone promote hardening of the blood vessels, aggression, prostate problems and an increase in total cholesterol.

Dihydrotestosterone (DHT) - Is made from testosterone in certain tissues. The rate of its production is controlled by the level of free active progesterone. Excess DHT causes prostate enlargement and thinning of scalp hair.

Progesterone - Is a hormone important to both men and women. It is a natural calming agent to our nervous system. It also keeps in check excessive DHT production and counterbalances the effects of excessive estrone. Unmonitored intake can lead to breast enlargement, depression and weight gain.

Estrone - Is an estrogen that both men and women produce in the fat cells. The more fat, the more estrone, which in turn promotes fat deposits. It is produced from androstenedione, and excess of estrone can cause breast enlargement and contribute to prostate enlargement. In males, a certain low level of estrone is mandatory to balance the androgens.

Estradiol - Is another estrogen that is much more powerful than estrone. It is partially formed in the testes but mostly in the perepheral tissues from both the testicular and adrenal androgens.

Diagram 1: Androgen Production Pathway

This pathway shows the relationship of cholesterol and pregnenolone, which are the precursors to steroid hormones.