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Accession # 12-eMHP

Received : 04/17/2012
 Completed: 04/17/2012
 Reported : 04/19/2012

DIAGNOS-TECHS, INC.
 DIAGNOS TECHS
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Results For:
 MALE PATIENT

Age: 42

Gender: Male

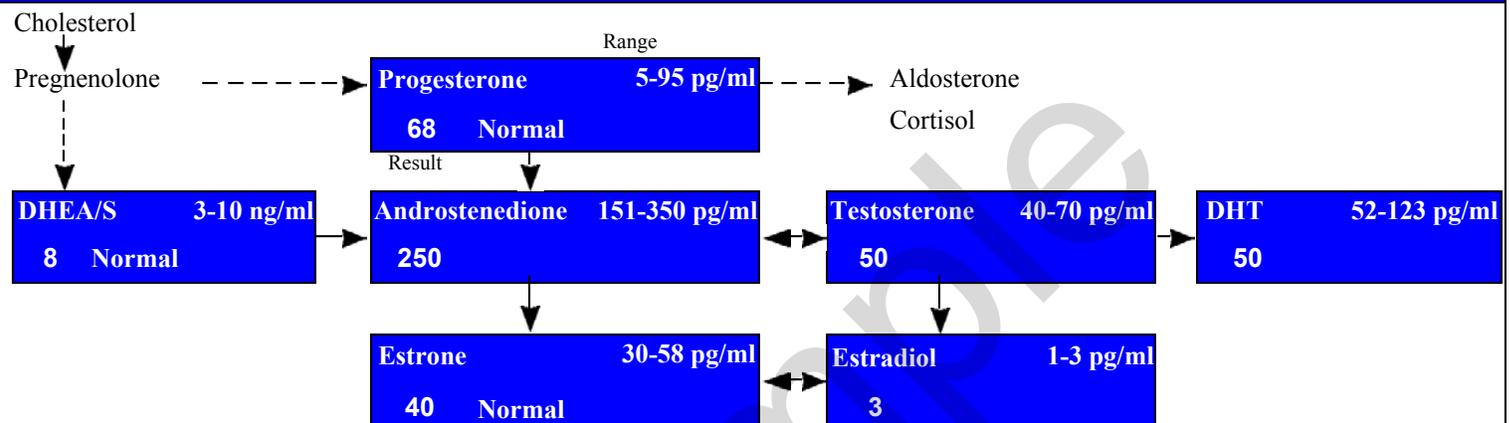
Patient's Tel:

Specimen Collected: 04/17/2012

Diagnosis Code: Not Provided To The Lab.

eMHP Expanded Male Hormone Panel

ANDROGEN PATHWAY



Hormone	Result	Notes	Reference Ranges
FSH - Follicle Stimulating Hormone	85	Normal	Normal All Ages: <125 uIU/mL
LH - Luteinizing Hormone	18	Normal	Normal All Ages: 10-25 uIU/mL

Reference Ranges - Male		
Hormone	Age	Range
Testosterone	< 20 yrs	70 - 135 pg/ml
	20 - 30 yrs	60 - 110
	31 - 40 yrs	50 - 80
	41 - 50 yrs	40 - 70
	51 - 60 yrs	35 - 65
	61 - 70 yrs	20 - 55
	> 70 yrs	15 - 45
Dihydrotestosterone	30 - 39 yrs	22 - 72 pg/ml
	40 - 49 yrs	52 - 123
	50 - 59 yrs	51 - 107
	> 60 yrs	39 - 89
Androstenedione	> 15 years	100 - 150 pg/ml Borderline Low 151 - 350 Normal 351 - 450 Borderline High
Estradiol	20 - 49 yrs	1 - 3 pg/ml
	50 - 85 yrs	1 - 5

Please Note: Beginning August 21, 2010 Diagnos-Techs has added Estradiol test to both regular and expanded Male Hormone Panels at no additional charge to extend the panels' clinical application.

Basic Facts:

1- Dehydroepiandrosterone (DHEA):

In both genders about 90% of DHEA is adrenal in origin.

In the adrenals, DHEA is converted in part to the male hormones androstenedione and testosterone which are released into the general circulation.

2- Androstenedione (ANDRO):

In men with normal testosterone levels, most of the circulating ANDRO is of adrenal origin, while testosterone is mainly testicular. With unusually high progesterone, ANDRO levels are known to go up.

3- Progesterone:

In men, circulating progesterone is mainly adrenal in origin. Brain progesterone however, is mainly produced by local neurons. Elevated progesterone is usually due to:

A - Adrenal overproduction.

B - Intentional supplemental intake (creams, drops, pills, etc)

C - Unintentional topical application. Example: Progesterone containing cosmetics, shampoos, and other sources...

Note: Progesterone is the natural inhibitor of the 5 alpha reductase enzyme that converts peripheral circulating testosterone into dihydrotestosterone in the target tissues.

4- Estrone and Estradiol:

In men these two hormones are mainly produced in the liver, fat, and muscle tissues by aromatization of androstenedione and testosterone. Chronic stress increases aromatase activity.

Scope of Influence:

Estrone and Estradiol are potent estrogens. Their activity is mediated by estrogen receptors found in the CNS, endocrine glands, prostate, skin, bone, and immune system and other tissues.

5- Testosterone:

In men, is mostly testicular. It is the main circulating natural steroid androgen. Adrenal production starts before puberty and is later augmented by testicular output at puberty.

It gradually declines after age 30 due to the permanent effects of various central and peripheral stressors. By the age of 80, testosterone declines to 20 - 50% of teenage values.

Scope of Influence:

The major role of testosterone is control of male vigor, vitality and fertility, secondary male attributes, muscle mass, cognitive functions, mood, male behavior traits, bone density, immune function...etc.

6- Dihydrotestosterone:

It is the most potent androgen (male hormone) is 3 - 5 times more potent than testosterone. It is selectively formed from testosterone in the target tissue by 5 alpha reductase enzyme activity.

Target tissues include scalp, prostate, skin, liver, muscle, and others. The most apparent long term effect of DHT is seen in increased prostate size and male pattern baldness.

7- Follicle Stimulating Hormone (FSH):

FSH is a pituitary hormone that regulates sperm production & testicular estrogen production and the peptide hormone inhibin in sertoli cells.

Inhibin exerts negative feedback on FSH production. Circulating FSH is a good index of sperm production in the testicles.

8- Leutinizing Hormones (LH):

LH is a pituitary hormone that regulates testicular androgen production. Circulating LH levels reflect the feed back sensitivity of the brain-hypothalamic pituitary testicular axis.

Note:

Salivary FSH and LH are a reflection of tissue bio availability and penetration. By coupling levels of **FSH to Estradiol** and **LH to Testosterone** the sensitivity of the testicles to gonadotropins can be objectively evaluated.