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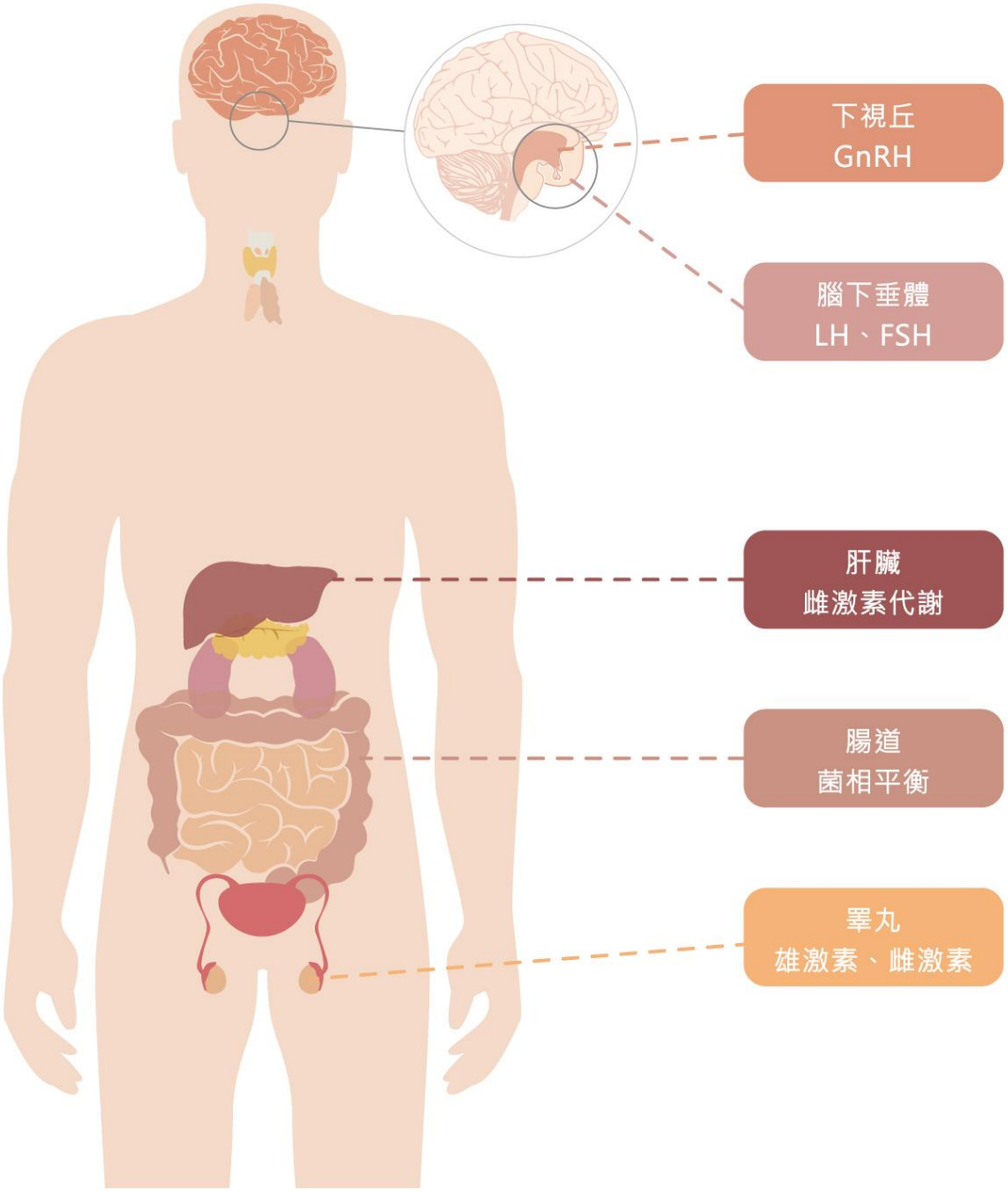
SAMPLE REPORT

Profile : FNHHM: Male Hormone Health Profile

Male Hormone Profile



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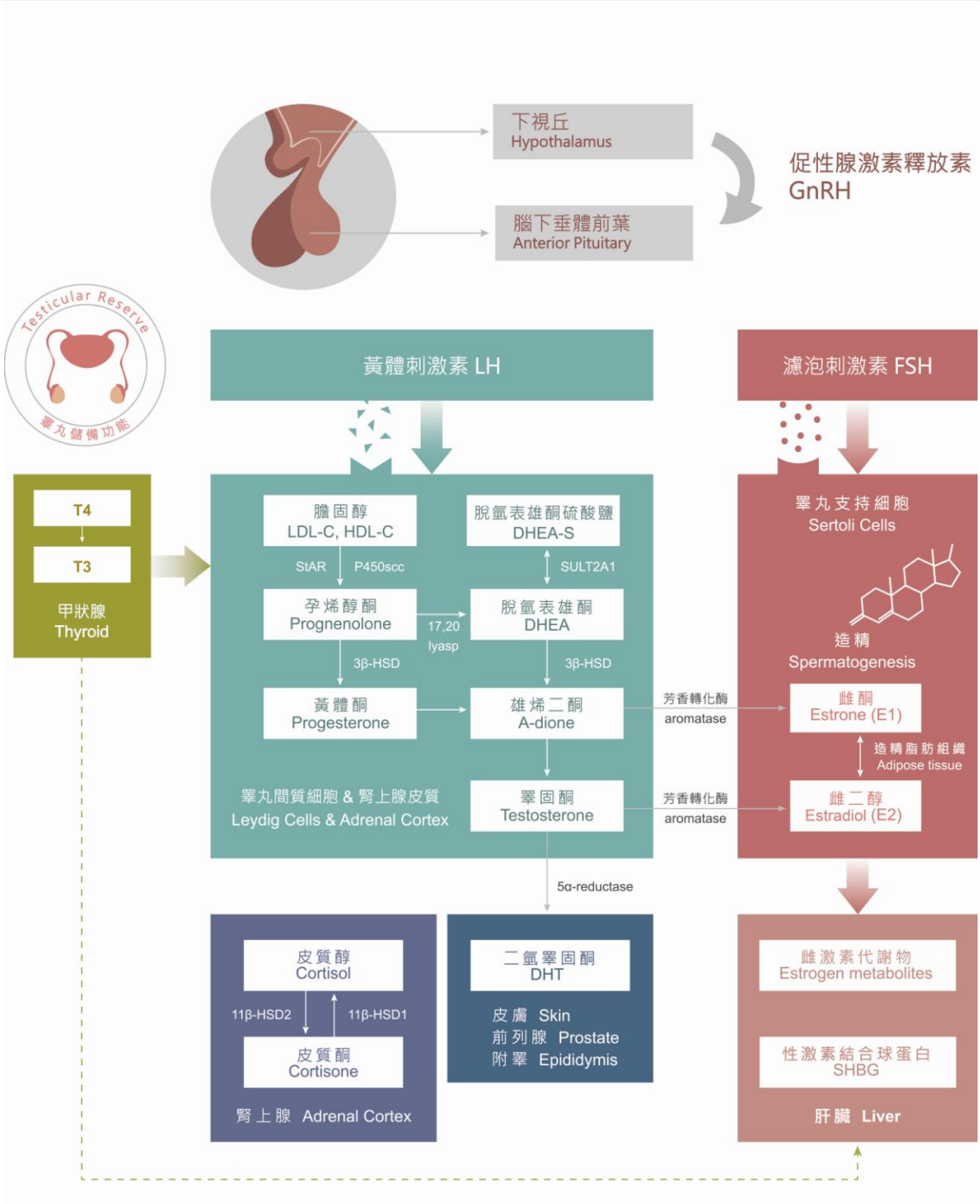
Male Hormone Profile



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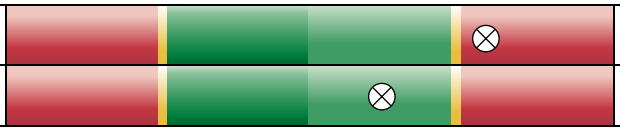
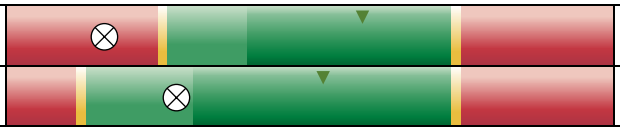
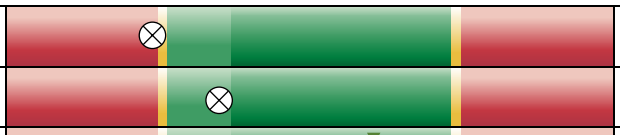
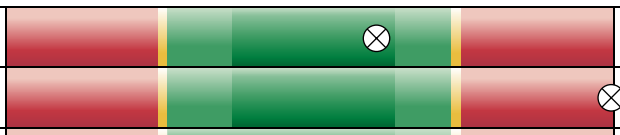
Male Hormone Profile

Pituitary Gonadotropin	Result	<= Reference Interval =>	Reference Range (Optimal)	
LH	9.12 ↑		1.7-8.6 (1.7-5.0)	mIU/ml
FSH	9.08		1.5-12.4 (1.5-6.0)	mIU/ml
Brain Neurohormone				
Pregnenolone	0.13 ↓		0.2-1.8 (0.56-2.2)	ng/ml
Progesterone	0.29		0.1-0.5 (0.32-0.7)	ng/ml
Androgen				
DHEA	1.56 ↓		1.6-8.3 (2.5-8.3)	ng/ml
A-dione	0.55		0.3-1.5 (0.6-1.5)	ng/ml
Testosterone	2.43 ↓		3.0-8.7 (4.6-9.2)	ng/ml
Bio-Testo	0.984 ↓		1.0-7.5 (3.0-7.5)	ng/ml
Free-Testo	43		38-207 (78-207)	pg/ml
DHT	317		300-900 (550-1100)	pg/ml
Estrogen				
E1	32.9		10-42 (15-35)	pg/ml
E2	71.8 ↑		9-36 (15-30)	pg/ml
E1/E2 ratio	0.46 ↓		0.5-2.0 (0.5-1.5)	ratio
Free E2	1.9 ↑		<0.55	pg/ml
Estrogen dominance				
FT/E2 ratio	0.5989 ↓		1.3-12.4 (3.5-8.0)	ratio
Sex hormone-binding globulin				
SHBG	37.8		15-45 (15-38)	nmol/L

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Male Hormone Profile

Anti-aging Hormone	Result	<= Reference Interval =>	Reference Range (Optimal)	
DHEA-S	1052		800-3800 (1600-4500)	ng/ml

Androgen

DHEA	1.56 ↓		1.6-8.3 (2.5-8.3)	ng/ml
A-dione	0.55		0.3-1.5 (0.6-1.5)	ng/ml
Testosterone	2.43 ↓		3.0-8.7 (4.6-9.2)	ng/ml
Bio-Testo	0.984 ↓		1.0-7.5 (3.0-7.5)	ng/ml
Free-Testo	43		38-207 (78-207)	pg/ml
DHT	317		300-900 (550-1100)	pg/ml

Stress and Anti-stress Hormone

Cortisol	6.73		6.2-21.3 (10.8-15.2)	µg/dL
Cortisone	1.34 ↓		1.8-5.2 (2.7-4.5)	µg/dL
DHEA	1.56 ↓		1.6-8.3 (2.5-8.3)	ng/ml
Cortisol/DHEA	4.31		1.9-7.4	ratio
Cortisol/Cortisone	5.02		1.5-8.35	ratio

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Male Hormone Profile

Item	Result	Optimal range	Reference Range	Unit
Pituitary Gonadotropin				
LH	9.12 ↑	1.7-5.0	1.7-8.6	mIU/ml
FSH	9.08	1.5-6.0	1.5-12.4	mIU/ml
Brain Neurohormone				
Pregnenolone	0.13 ↓	0.56-2.2	0.2-1.8	ng/ml
Progesterone	0.29	0.32-0.7	0.1-0.5	ng/ml
Androgen				
DHEA	1.56 ↓	<18y: 3.7-8.7 >18y: 2.5-8.3	<18y: 2.0-8.7 >18y: 1.6-8.3	ng/ml
A-dione	0.55	0.6-1.5	0.3-1.5	ng/ml
Testosterone	2.43 ↓	<18y: 4.6-9.8 >18y: 4.6-9.2	<18y: 3.0-9.8 >18y: 3.0-8.7	ng/ml
Bio-Testosterone	0.984 ↓	3.0-7.5	1.0-7.5	ng/ml
Free-Testosterone	43	<18y: 91-242 >18y: 78-207	<18y: 49-242 >18y: 38-207	pg/ml
DHT	317	550-1100	300-900	pg/ml
Estrogen				
E1	32.9	15-35	10-42	pg/ml
E2	71.8 ↑	15-30	9-36	pg/ml
E1/E2 ratio	0.46 ↓	0.5-1.5	0.5-2.0	ratio
Free E2	1.9 ↑	-	<0.55	pg/ml

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Male Hormone Profile

Item	Result	Optimal range	Reference Range	Unit
Estrogen dominance				
FT/E2	0.5989 ↓	3.5-8.0	1.3-12.4	ratio
Sex hormone-binding globulin				
SHBG	37.8	15-38	15-45	nmol/L
Anti-aging Hormone				
DHEA-S	1052	<18y: 1700-4100	<18y: 950-4100	ng/ml
		>18y: 1600-4500	>18y: 800-3800	
Stress and Anti-stress Hormone				
Cortisol	6.73	10.8-15.2	6.2-21.3	µg/dL
Cortisone	1.34 ↓	2.7-4.5	1.8-5.2	µg/dL
DHEA	1.56 ↓	<18y: 3.7-8.7	<18y: 2.0-8.7	ng/ml
		>18y: 2.5-8.3	>18y: 1.6-8.3	
Cortisol/DHEA	4.31	-	1.9-7.4	ratio
Cortisol/Cortisone	5.02	-	1.5-8.35	ratio

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Male Hormone Profile

Male Hormone Interpretation Guide

How Does the Male Reproductive System Function?

The entire male reproductive system is dependent on hormones, which are chemicals that regulate the activity of many different types of cells or organs. The primary hormones involved in the male reproductive system are follicle-stimulating hormone, Luteinizing hormone, and testosterone.

Follicle-stimulating hormone is necessary for sperm production (spermatogenesis), and luteinizing hormone stimulates the production of testosterone, which is also needed to make sperm. Testosterone is responsible for the development of male characteristics, including muscle mass and strength, fat distribution, bone mass, facial hair growth, voice change, and sex drive .

Pituitary Gonadotropin

Luteinizing Hormone · LH

LH is a hormone produced by the anterior pituitary gland. The release of LH at the pituitary gland is controlled by pulses of gonadotropin-releasing hormone (GnRH) from the hypothalamus. Those pulses, in turn, are subject to the estrogen feedback from the gonads. In the male, LH acts upon the Leydig cell of the testis and is responsible for the production of testosterone, the "male hormone" that exerts both endocrine activity and intratesticular activity such as spermatogenesis.

Your LH level is above the reference range. High level of LH indicates testicular testosterone production deficiency. Persistently high LH levels are indicative of situations where the normal restricting feedback from the gonad is absent, leading to a pituitary production of both LH and FSH.

Follicle-Stimulating Hormone · FSH

FSH is a hormone synthesized and secreted by gonadotropes in the anterior pituitary gland. Synthesis and release of FSH is triggered by the arrival from the hypothalamus of gonadotropin-releasing hormone (GnRH). In males, FSH enhances the production of androgen-binding protein by the Sertoli cells of the testes, and is critical for spermatogenesis.

Your FSH level is within the reference range.

Neurosteroids

A brain steroid, a molecule structurally similar to cortisone, progesterone and the gonadal hormones. Neurosteroids play a role in cintrolling anxiety and depression. Antidepressant drugs known as selective serotonin reuptake inhibitors (SSRIs) increase the brain levels of neurosteroids as well as affecting the levels of chemical serotonin in the brain. Neurosteroid levels are changes in diseases of the nervous system. It has been well documented that neurosteroids protective role on the neurons. Neurosteroids reduces the disorders associated with nervous system in neurodegenerative diseases and can be used as preventive and therapeutic in these diseases.

Pregnenolone · P5

Pregnenolone is a precursor to the body' s other naturally occurring hormones, including DHEA, progesterone, estrogen, testosterone, and cortisol. Pregnenolone is synthesized directly from cholesterol and is responsible for

countless functions in our bodies. By the age of 75, however, the body's production of this valuable hormone has declined by as much as 60%, and levels of the hormones for which pregnenolone is a precursor have also diminished.

Enhancing Memory and Cognition

Boosting acetylcholine levels, increasing neurogenesis (the creation of new neurons), and regulating gamma-aminobutyric acid (GABA) are among the ways pregnenolone may help improve memory and cognitive function. Acetylcholine is a critical neurotransmitter that helps brain cells communicate with each other. Many Alzheimer's medications, such as Aricept® and Reminyl®, work by inhibiting the breakdown of acetylcholine.

Alleviating Arthritis Symptoms

Even when energy levels are high, arthritis may still prevent many aging adults from enjoying the activities of their youth. Several studies have reported the benefits of pregnenolone in arthritic conditions. In one study of pregnenolone therapy in rheumatoid arthritis, six of 11 patients experienced moderate to marked improvement in joint pain and joint mobility. In one person who suffered from gout and was unresponsive to traditional medications, pregnenolone therapy resulted in a dramatic response within three days of initiating therapy.

Your Pregnenolone is below the reference range. Besides aging, stress, disease, hypothyroidism, exposure to toxins and depression all result in low pregnenolone levels. Patients suffering from depression have been found to have pregnenolone levels less than half those found in nondepressed persons.

Progesterone · P4

Progesterone is produced in small amounts in men too. Progesterone is as vital for men's health as it is for women's. When it comes to men & progesterone, progesterone protects men against excessive estrogen. Like women, men are also at risk of becoming estrogen dominant, and the symptoms, although different from women's, can also be dire. Progesterone is an 5-alpha reductase inhibitor - it helps prevent the conversion of testosterone into DHT. Progesterone may also help men with complexion and increased energy. Progesterone balances the estrogens that build in a man's body. Furthermore, it may be important in the prevention and/or treatment of prostatism and prostate cancer.

Your Progesterone level is within the reference range.

Androgens

Androgens may be called "male hormones," but don't let the name fool you. Both men's and women's bodies produce androgens, just in differing amounts. In fact, androgens have more than 200 actions in women, and they are present in higher amounts than estrogens. The principal androgens are testosterone and androstenedione. They are, of course, present in much higher levels in men and play an important role in male traits and reproductive activity. Other androgens include dihydrotestosterone (DHT), dehydroepiandrosterone (DHEA) and DHEA sulfate (DHEA-S). In a woman's body, one of the main purposes of androgens is to be converted into the female hormones called estrogens.

Dehydroepiandrosterone · DHEA

Dehydroepiandrosterone (DHEA) is a weak androgen synthesized by the adrenal cortex. It has a short half-life and is usually converted to dehydroepiandrosterone sulfate (DHEA-S).

Youe DHEA level is below the reference range. DHEA levels decrease sharply with age, falling 90% from age 20 to age 90. But many other factors are also responsible for depleted DHEA levels. Symptoms of DHEA deficiency

Male Hormone Profile

include depression, frequent illness due to a weakened immune system, pain in the joints, less muscle and bone mass and overwhelming fatigue.

Androstenedione · A-dione

The steroid hormone androstenedione is one of the main androgens, besides Testosterone and Dehydroepiandrosterone. Testosterone, the most important biological active androgen, is derived from peripheral enzymatic conversion of androstenedione. In males, androgens are secreted primarily by the Leydig cells of the testes, to some degree also in the adrenal cortex. Androstenedione and Testosterone show high diurnal variability. The highest levels are measured in the morning. At the age of puberty serum androstenedione levels rise, after menopause they decline again.

Your A-dione level is within the reference range.

Testosterone

Testosterone is a steroid hormone from the androgen group. In mammals, testosterone is primarily secreted in the testes of males, although small amounts are also secreted by the adrenal glands. It is the principal male sex hormone and an anabolic steroid. Testosterone production begins in the brain. When the hypothalamus detects a deficiency of testosterone in the blood, it secretes a hormone called gonadotrophin-releasing hormone to the pituitary gland. This promotes the pituitary to secrete luteinizing hormone (LH), which the prompts the Leygid cells in the testes to product testosterone. In both men and women, testosterone plays a key role in health and well-being as well as in sexual functioning. Examples include enhanced libido, increased energy, increased production of red blood cells and protection against osteoporosis.

Your Testosterone level is below the reference range. Lower testosterone levels with a blunting of the normal diurnal rhythm may occur with aging and in testicular failure. Decreased testosterone levels are associated with fatigue, depression, irritability, decreased libido, impotence, infertility, weight gain, gynecomastia, decreased muscle mass and strength, decreased hematocrit, diminishing body and facial hair and increased risk for osteoporosis.

Free-Testosterone、Bio-Testosterone

Free testosterone represents the fraction of testosterone that is not bound to sex hormone binding globulin (SHBG), therefore bioavailable. In normal males, 2% of testosterone is free (unbound) and 30% bound to sex-hormone-binding globulin (SHBG) with high affinity. The fraction of T not bound to SHBG makes up the measure known as bioavailable T. These binding proteins regulate androgen function.

Your Free Testosterone level is within the reference range.

Your Bio-Testosterone level is below the reference range. Low Free Testosterone is usually due to age-related decline or hypogonadal function. A higher concentration of SHBG (such as occurs with hyperthyroidism or oral estrogen replacement) can also lead to lower levels of Free Testosterone. Men may benefit from testosterone replacement, whereas women may do well with DHEA or androstenedione.

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Dihydrotestosterone · DHT

Dihydrotestosterone (DHT) is a biologically active metabolite of the hormone testosterone, formed primarily in the prostate gland, testes, hair follicles, and adrenal glands by the enzyme 5α-reductase. Androgens are part of the biology of gender by stimulating and controlling the development and maintenance of masculine characteristics. DHT is 3 times more potent than testosterone; testosterone is 5-10 times more potent than adrenal androgens. While DHT is best known for its roles in causing male pattern hair loss and prostate problems, it is crucial to virilization and is necessary to mitigate estrogen's effects in men.

Your DHT level is within the reference range.

Estrogens

Estrogens is a problem in men. Estrogens levels rise as men age; this is mainly because of the increased production of an enzyme called aromatase. However, other factors also cause estrogen levels to become elevated, for example: alterations in liver function, zinc deficiency, obesity, overuse of alcohol, environmental estrogens, and medications. A number of medications increase estrogen in men; these include statin drugs, and some blood pressure drugs, antidepressants, and nonsteroidal anti-inflammatory drugs. Estrogen really is an issue with men – if estrogen levels go to high the risk of heart disease rises dramatically.

Estrone · E1

Estrone (E1) is the second most potent estrogen next to estradiol, and is derived from either estradiol or adrenal androstenedione via aromatization in peripheral tissues such as adipose. In turn, E1 converted to 2-, 4-, or 16α -hydroxy-estrone. Estrone regulates a man' s reproductive system and sex drive, while normal levels maintain heart rate.

E1 level is within the reference range.

Estradiol · E2 、 Free Estradiol · Free E2

Estradiol (E2) is the most potent estrogen. E2 may arise from E1 or from testosterone in peripheral tissues such as adipose. Estrogens promote vasodilatation and vascular smooth muscle tone, collagen production, brain activity, and also inhibit bone resorption.

Your E2 level is above the reference range. Elevated levels in males can lead to gynocomastia (breast tenderness or soreness). Increased body fat that can deactivate male androgens may cause increased estradiol levels in males. Levels in men can also be increased by excessive use of marijuana, alcohol, or prescribed drugs, including phenothiazines and spironolactone. Estradiol levels can also be dramatically elevated in testicular or ovarian tumors and tumors of a number of glands in both men and women.

Your Free E2 level is above the reference range. Elevated levels in males can lead to gynocomastia (breast tenderness or soreness). Increased body fat that can deactivate male androgens may cause increased estradiol levels in males. Levels in men can also be increased by excessive use of marijuana, alcohol, or prescribed drugs, including phenothiazines and spironolactone. Estradiol levels can also be dramatically elevated in testicular or ovarian tumors and tumors of a number of glands in both men and women.

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Male Hormone Profile

E1 / E2 ratio

Men and women produce estrogen, called estrone in men. An enzyme synthesizes estrogen from testosterone in small amounts in the male body. Estrone regulates a man' s reproductive system and sex drive, while normal levels maintain heart rate. E2 may arise from E1 or from testosterone in peripheral tissues such as adipose. Estradiol:Estrone ratio should be approximately 1:1

Estrogen dominance

FT / E2 ratio · Free-Testosterone / Estradiol ratio

As men age, their estradiol levels gradually rise, whereas their progesterone and testosterone levels gradually fall. The hormone balance changes. These gradual changes lead to reduction in testosterone benefits and eventually to estrogen dominance. That is, his estradiol effects emerge since his testosterone level is not sufficient to block or balance them. Estrogen dominance stimulates breast cell growth and endometrial cell proliferation in women. In men, estrogen dominance stimulates breast cell growth and prostate hypertrophy. Estrogen dominance is responsible for the majority of breast cancers and is the only known cause of endometrial cancer in women. Since the male prostate is the embryonic equivalent of the uterus, is should not be surprising that estrogen dominance is also a major cause of prostate cancer.

Your FT/E2 level is below the reference range. High levels of estrogen can cause reduced levels of testosterone, fatigue, loss of muscle tone, increased body fat, increased risk of diabetes, heart attack or stroke, some cancers, loss of libido and sexual function (erectile dysfunction) and an enlarged prostate.

Sex hormone-binding globulin

Sex hormone binding globulin · SHBG

Sex hormone-binding globulin (SHBG) is synthesized primarily in the liver and serves as a protein carrier for Estradiol (E2), testosterone, and dihydrotestosterone (DHT). The biologic effects of these steroid hormones (especially testosterone) are largely determined by the unbound portion. Thus, SHBG exerts a major regulatory effect on bioactivity of these steroids.

Your SHBG level is within the reference range. Since SHBG concentrations determine bioavailability of E2, testosterone, and DHT, normal levels of SHBG are considered protective against conditions associated with excessive androgenic and estrogenic activity such as breast cancer, as well as conditions associated with deficient activity such as osteoporosis.

Anti-aging Hormone

DHEA-S

Dehydroepiandrosterone-sulfate (DHEA-S) circulates in a higher concentration than any other steroid, is derived from the adrenal gland in response to ACTH, and is the storage form for DHEA. This anabolic hormone serves as a

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precursor to other androgens such as androstenedione (A-dione) and testosterone, which may, in turn, be enzymatically converted to estrogens in peripheral tissues such as adipose and bone. DHEA-S also plays an important role in thyroid function, immune regulation, maintenance of libido and lean body mass, insulin sensitivity, and balancing the body's stress response. DHEA-S levels peak between the ages of 20 and 30 years, thereafter decreasing markedly, along with downstream androgens and estrogens.

Your DHEA-S level is within the reference range.

Adrenal Gland Essentials

The adrenal glands are two glands that sit on top of your kidneys that are made up of two distinct parts.

- The adrenal cortex-the outer part of the gland-produces hormones that are vital to life, such as cortisol (whichhelps regulate metabolism and helps your body respond to stress) and aldosterone (which helps control blood pressure).
- The adrenal medulla-the inner part of the gland-produces nonessential (that is, you don’ t need them to live) hormones, such as adrenaline (which helps your body react to stress).

When you think of the adrenal glands (also known as suprarenal glands), stress might come to mind. And rightly so - the adrenal glands are arguably best known for secreting the hormone adrenaline, which rapidly prepares your body to spring into action in a stressful situation. But the adrenal glands contribute to your health even at times when your body isn’ t under extreme stress. In fact, they release hormones that are essential for you to live

Cortisol

Cortisol is the major glucocorticoid secreted by the adrenal gland. Secretion is regulated by ACTH in a diurnal fashion. ACTH secretion peaks in the early morning hours, stimulating a morning peak of serum cortisol concentration. Cortisol, therefore, is best measured in the morning (8 AM) when evaluating for possible adrenal insufficiency and best measured in the afternoon or evening (4-11 PM) to differentiate normal and Cushing's syndrome subjects. Baseline and postdexamethasone suppression values may be useful in differential diagnosis. ACTH-stimulated values also may be useful. Combined measurements of serum cortisol and ACTH provide differential diagnostic discrimination in most cases.

Your Cortisol is within the reference range.

Cortisone

Cortisol, the active glucocorticoid produced by the adrenal gland, is inactivated to cortisone in peripheral tissues. Excretion of both cortisol and cortisone is increased in patients with Cushing's syndrome but reduced in patients with adrenal insufficiency and in those receiving exogenous glucocorticoid (e.g., prednisone). In patients with apparent mineralocorticoid excess (AME), cortisone formation is reduced, allowing cortisol to act as a mineralocorticoid. Patients with AME have reduced cortisone and aldosterone excretion, while urinary free cortisol is normal or increased.

Your Cortisone is below the reference range. Decreased cortisone levels occur in forms of adrenal insufficiency, exogenous Cushing’ s (prednisone), and AME.

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Cortisol/DHEA ratio

While cortisol levels stay the same or even increase as we age, levels of another vitally important hormone, DHEA, decrease with each passing year. This relationship between cortisol and DHEA has led some to suggest that these adrenal hormones may play a significant role in the aging process and its associated negative health effects.

Your Cortisol/DHEA is within the reference range.

Cortisol/Cortisone ratio

Cortisol, the active glucocorticoid produced by the adrenal gland, is inactivated to cortisone in peripheral tissues. 11beta-Hydroxysteroid dehydrogenase (11beta-HSD) enzymes convert cortisol into inactive cortisone and vice versa. While 11beta-HSD type 2 (mainly localized in the kidney) unidirectional inactivates cortisol to cortisone, type I isoform (mainly localized in the liver) acts bidirectional and can thus potentially restore cortisone to active cortisol.

Your Cortisol/Cortisone is within the reference range.

Hormone Imbalance - Prevention & Curing Protocol:

1. The ideal process for achieving hormonal balance includes an assessment of Cardiometabolic Health Profile, Estrogen Metabolism Health Profile, Adrenocortex Stress Profile, Tumor Marker, Liver Function Test, Renal Function Test, Blood Routine, and Estrogen Genomics.
2. Promotes healthy prostate tissue and urinary function - saw palmetto extract, pygeum africanum extract, nettle root extract.
3. For healthy homocysteine metabolism and supports healthy phase II methylation during liver detoxication reactions - choline、vitamin B2、B6、methylcobalamin、calcium folinate、trimethylglycine.
4. Antioxidants and nutritional supplements that heal the liver and improve liver function - glutathione, N-acetyl-l-cysteine, lipoic acid, sulfur, taurine, milk thistle, glycine, and methionine.
5. Mood support - theanine, 5-HTP,St. John’ s Wort, and ginkgo biloba.
6. Reducing inflammation - resveratrol, curcumin, quercetin, catechin, and boswellia.

*** The above suggestions are for doctor’ s reference only ***