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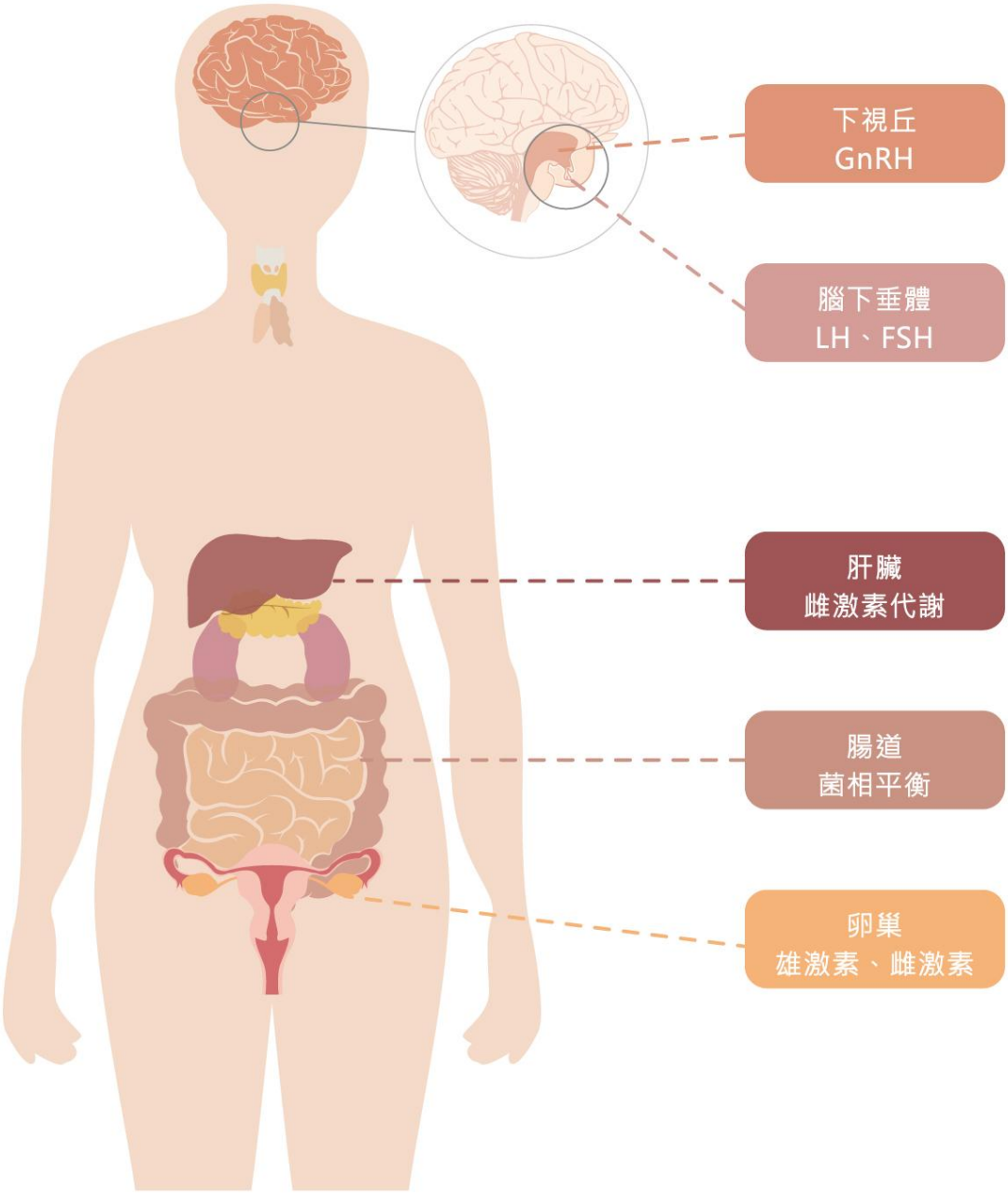
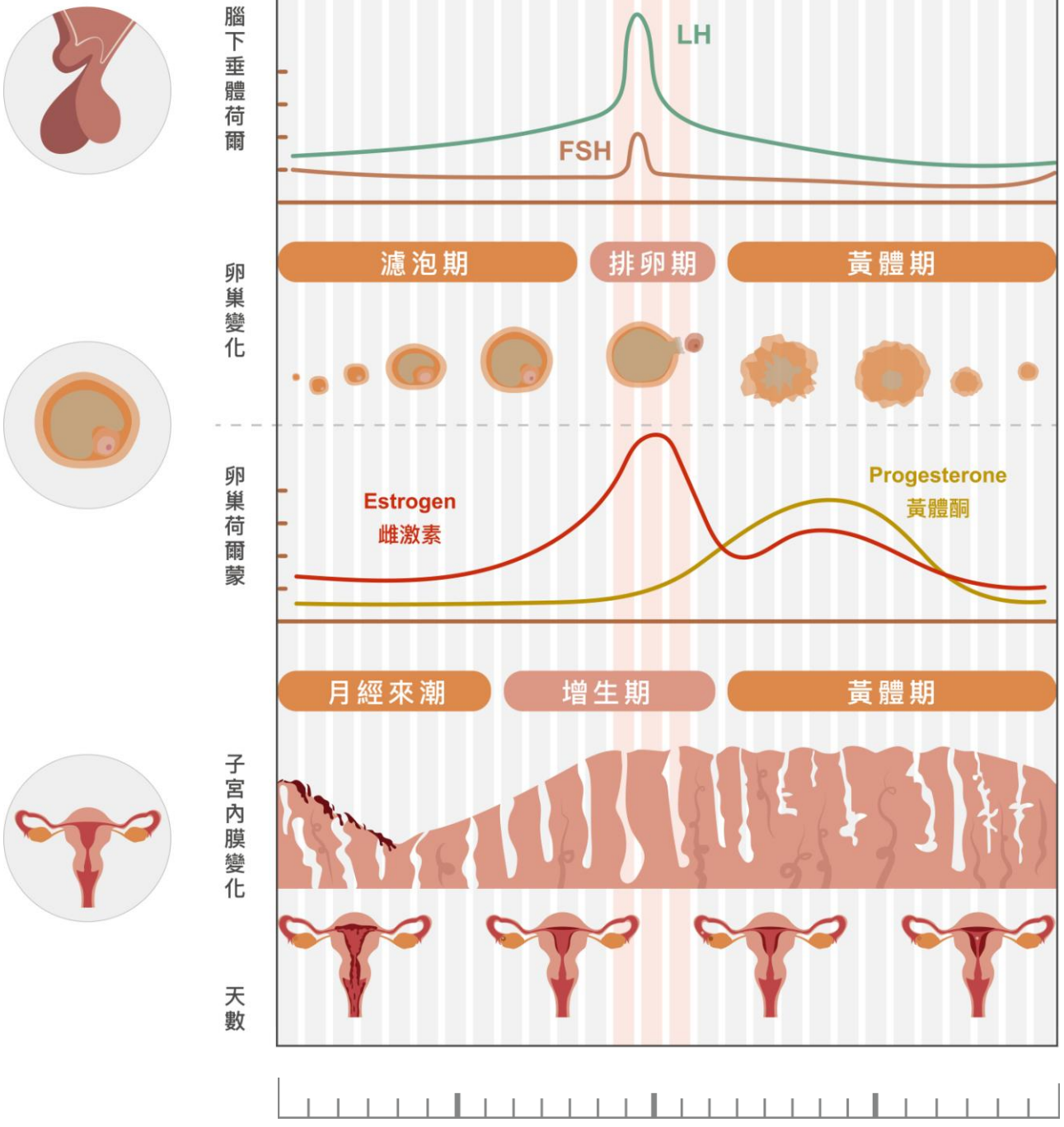
SAMPLE REPORT

Profile: : FNHHF: Female Hormone Health Profile

Premenopause Hormone Profile

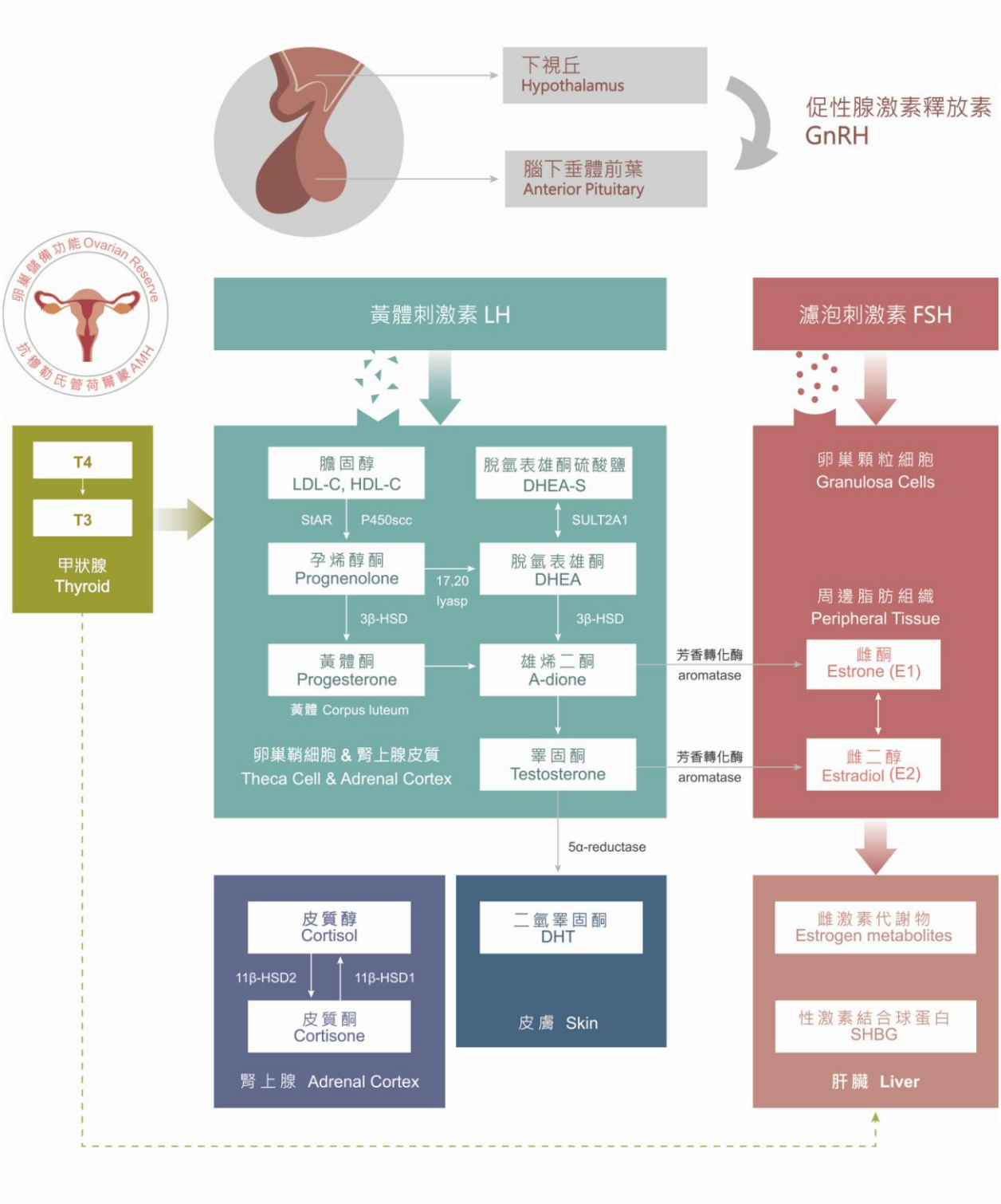


Premenopause Hormone Profile



Date of cycle: Date of last menstrual period:

Premenopause Hormone Profile



Premenopause Hormone Profile

Pituitary Gonadotropin

	Result	<= Reference Interval =>	Reference Range (Optimal)	
LH	61.0 ↑		1.0-11.4 (1.0-6.2)	mIU/ml
FSH	94.8 ↑		1.7-7.7 (1.7-5.0)	mIU/ml
LH/FSH	0.64		0.3-2.1 (0.8-1.6)	ratio

Ovarian reserve function

AMH	<0.03 ↓		1.2-6.8 (4.2-8.7)	ng/ml

Brain Neurohormone

Pregnenolone	0.12 ↓		0.24-1.4 (0.76-2.2)	ng/ml
Progesterone	0.12 ↓		4.0-22 (8.0-28)	ng/ml

Estrogen

E1	8.13 ↓		28-80 (40-100)	pg/ml
E2	9.01 ↓		43-145 (60-165)	pg/ml
E1/E2	0.90		0.4-2.0 (0.8-1.6)	ratio
Free E2	0.16 ↓		0.4-4.5 (1.3-5.5)	pg/ml

Estrogen dominance

P4/E2	13.3 ↓		50-250 (120-250)	ratio

Sex hormone-binding globulin

SHBG	96.3		26-118 (49-95)	nmol/L

Date of cycle:

Date of last menstrual period:

Premenopause Hormone Profile

Anti-aging Hormone

	Result	<= Reference Interval =>	Reference Range (Optimal)	
DHEA-S	1204		350-2600 (1480-3500)	ng/ml

Androgen

DHEA	1.40		1.3-8.0 (2.2-8.0)	ng/ml
A-dione	0.15 ↓		0.35-1.9 (0.9-1.9)	ng/ml
Testosterone	0.08		0.08-0.6 (0.35-0.8)	ng/ml
Bio-Testo	0.015 ↓		0.02-0.15 (0.06-0.15)	ng/ml
Free-Testo	0.67 ↓		1.2-10.2 (3.5-10.2)	pg/ml
DHT	74.0		30-220 (90-260)	pg/ml

Stress and Anti-stress Hormone

Cortisol	9.85		6.2-21.3 (10.8-15.2)	µg/dL
Cortisone	2.21		1.8-5.2 (2.7-4.5)	µg/dL
DHEA	1.40		1.3-8.0 (2.2-8.0)	ng/ml
Cortisol/DHEA	7.04 ↑		1.6-4.5	ratio
Cortisol/Cortisone	4.46		1.5-8.35	ratio

Premenopause Hormone Profile

Item	Result	Ovary cycle		Postmenopause		Unit
		Follicular (Optimal)	Luteal (Optimal)	Non-HRT (Optimal)	HRT (Optimal)	
Pituitary Gonadotropin						
LH	61.0 ↑	2.4-12.6 (2.4-7.5)	1.0-11.4 (1.0-6.2)	15-75	15-75	mIU/ml
FSH	94.8 ↑	3.5-12.5 (3.5-8.0)	1.7-7.7 (1.7-5.0)	26-135	26-135	mIU/ml
LH/FSH ratio	0.64	0.3-2.1 (0.8-1.6)	0.3-2.1 (0.8-1.6)	0.4-1.3	0.4-1.3	ratio
Ovarian reserve function						
AMH	<0.03 ↓	1.2-6.8 (4.2-8.7)	1.2-6.8 (4.2-8.7)	< 0.3	-	ng/ml
Brain Neurohormone						
Pregnenolone	0.12 ↓	0.24-1.4 (0.76-2.2)	0.24-1.4 (0.76-2.2)	0.24-1.4 (0.76-2.2)	0.24-1.4 (0.76-2.2)	ng/ml
Progesterone	0.12 ↓	0.1-1.5 (0.5-2.2)	4.0-22 (8.0-28)	0.1-0.75 (0.5-2.2)	2.0-8.0 (2.0-8.0)	ng/ml
Estrogen						
E1	8.13 ↓	30-130 (45-150)	28-80 (40-100)	3.0-32 (20-60)	28-80 (40-100)	pg/ml
E2	9.01 ↓	39-332 (60-375)	43-145 (60-165)	3.0-21 (15-50)	43-145 (60-165)	pg/ml
E1/E2 ratio	0.90	0.4-2.0 (0.8-1.6)	0.4-2.0 (0.8-1.6)	0.5-2.0 (0.5-1.5)	0.4-2.0 (0.8-1.6)	ratio
Free E2	0.16 ↓	0.4-4.5 (1.3-5.5)	0.4-4.5 (1.3-5.5)	0.1-0.3 (0.25-0.9)	0.4-4.5 (1.3-5.5)	pg/ml
Estrogen dominance						
P4/E2	13.3 ↓	-	50-250 (120-250)	-	-	ratio
Sex hormone-binding globulin						
SHBG	96.3	26-118 (49-95)	26-118 (49-95)	26-118 (49-95)	26-118 (49-95)	nmol/L

Date of last menstrual period:

Date of cycle:

Premenopause Hormone Profile

Item	Result	Ovary cycle		Postmenopause		Unit
		Follicular (Optimal)	Luteal (Optimal)	Non-HRT (Optimal)	HRT (Optimal)	
Anti-aging Hormone						
DHEA-S	1204	<18y:700-3200 (1200-3200) >18y:350-2600 (1480-3500)	<18y:700-3200 (1200-3200) >18y:350-2600 (1480-3500)	350-2600 (1480-3500)	350-2600 (1480-3500)	ng/ml
Androgen						
DHEA	1.40	<18y: 2.0-8.7 (2.5-8.3) >18y: 1.3-8.0 (2.2-8.0)	<18y: 2.0-8.7 (2.5-8.3) >18y: 1.3-8.0 (2.2-8.0)	0.6-7.0 (3.0-7.0)	1.3-8.0 (2.2-8.0)	ng/ml
A-dione	0.15 ⬇	0.35-1.9 (0.9-1.9)	0.35-1.9 (0.9-1.9)	0.13-0.82 (0.31-0.82)	0.35-1.9 (0.9-1.9)	ng/ml
Testosterone	0.08	0.08-0.6 (0.35-0.8)	0.08-0.6 (0.35-0.8)	0.08-0.5 (0.3-0.7)	0.08-0.6 (0.35-0.8)	ng/ml
Bio-Testosterone	0.015 ⬇	0.02-0.15 (0.06-0.15)	0.02-0.15 (0.06-0.15)	0.02-0.15 (0.06-0.15)	0.02-0.15 (0.06-0.15)	ng/ml
Free-Testosterone	0.67 ⬇	1.2-10.2 (3.5-10.2)	1.2-10.2 (3.5-10.2)	0.8-7.3 (2.4-7.3)	1.2-10.2 (3.5-10.2)	pg/ml
DHT	74.0	30-220 (90-260)	30-220 (90-260)	20-160 (60-200)	30-220 (90-260)	pg/ml
Stress and Anti-stress Hormone						
Cortisol	9.85	6.2-21.3 (10.8-15.2)	6.2-21.3 (10.8-15.2)	6.2-21.3 (10.8-15.2)	6.2-21.3 (10.8-15.2)	μg/dL
Cortisone	2.21	1.8-5.2 (2.7-4.5)	1.8-5.2 (2.7-4.5)	1.8-5.2 (2.7-4.5)	1.8-5.2 (2.7-4.5)	μg/dL
DHEA	1.40	<18y: 2.0-8.7 (2.5-8.3) >18y: 1.3-8.0 (2.2-8.0)	<18y: 2.0-8.7 (2.5-8.3) >18y: 1.3-8.0 (2.2-8.0)	0.6-7.0 (3.0-7.0)	1.3-8.0 (2.2-8.0)	ng/ml
Cortisol/DHEA	7.04 ⬆	1.6-4.5	1.6-4.5	1.6-4.5	1.6-4.5	ratio
Cortisol/Cortisone	4.46	1.5-8.35	1.5-8.35	1.5-8.35	1.5-8.35	ratio

Female Hormone Interpretation Guide

The female reproductive system is designed to carry out several functions. It produces the female egg cells necessary for reproduction, called the ova or oocytes. The system is designed to transport the ova to the site of fertilization. Conception, the fertilization of an egg by a sperm, normally occurs in the fallopian tubes. The next step for the fertilized egg is to implant into the walls of the uterus, beginning the initial stages of pregnancy. If fertilization and/or implantation does not take place, the system is designed to menstruate (the monthly shedding of the uterine lining). In addition, the female reproductive system produces female sex hormones that maintain the reproductive cycle.

What Happens During the Menstrual Cycle?

Females of reproductive age experience cycles of hormonal activity that repeat at about one-month intervals. With every cycle, a woman's body prepares for a potential pregnancy, whether or not that is the woman's intention. The term menstruation refers to the periodic shedding of the uterine lining. (Menstru means "monthly.")

The average menstrual cycle takes about 28 days and occurs in phases: the follicular phase, the ovulatory phase (ovulation), and the luteal phase.There are four major hormones (chemicals that stimulate or regulate the activity of cells or organs) involved in the menstrual cycle: follicle-stimulating hormone, luteinizing hormone, estrogen, and progesterone.

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 above the reference range. High levels of FSH can indicate primary ovarian failure, meaning that there is a problem with the ovaries that prevents them from producing eggs.

LH / FSH Ratio

LH/FSH ratio refers to the relative values of two gonadotropin hormones produced by the pituitary gland in women. Luteinizing hormone (LH) and follicle stimulating hormone (FSH) stimulate ovulation by working in different ways. In pre-menopausal women, the normal LH/FSH ratio is 1:1 as measured on day three of the menstrual cycle. Variations from this ratio can be used to diagnose polycystic ovarian syndrome (PCOS) or other

disorders, explain infertility, or verify that a woman has entered menopause
LH/FSH level is within the reference range.

Ovarian reserve function

Anti-Mullerian Hormone(AMH)

Anti-Mullerian Hormone(AMH) is a glycoprotein hormone, a product of granulosa cells of the preantral and small antral follicles in women. AMH levels decrease over time as fertility decreases as well, thus, AMH can also serve as a molecular biomarker for relative size of the ovarian reserve, the number of cells in the follicular reserve can be used to predict timing of menopause. Measuring the AMG level in young women helps assessing conditions such as polycystic ovary syndrome and premature ovarian failure at early stage for early treatment. The higher level of AMH is, the lower level of FSH. Weight gain, gonadotropin injections, chemotherapy or radiotherapy, ovariectomy also reduce the level of AMH. AMH level is unaffected by pregnancy, oral contraceptives or menstrual cycle.
Your AMH level is below the reference range. Aging is the primary reason for low AMH levels. Early ovarian aging due to stress, poor food choices, low circulation to the ovaries, hormonal imbalance, illness, injury, genetic factors, autoimmune disorders and even lifestyle factors (shared in detail below) can all impact AMH levels and ovarian function. Low AMH levels in younger women (35 and under) can signal they are at risk for early menopause. In these situations, natural and/or medical measures may be needed to help preserve and enhance fertility.

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.

Premenopause Hormone Profile

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.

Progesterone level is below the reference range. Symptoms of low progesterone in men include low libido, hair loss, weight gain, fatigue, depression, gynecomastia ("man-boobs"), erectile dysfunction, impotence, bone loss and muscle loss. In addition, men with low levels of progesterone have a higher risk of developing health conditions, such as osteoporosis, arthritis, prostatism and prostate cancer.

Estrogen

In women, estrogen is produced mainly in the ovaries. Ovaries are grape-sized glands located by the uterus and are part of the endocrine system. Estrogen is also produced by fat cells and the adrenal gland. At the onset of puberty, estrogen plays a role in the development of so-called female secondary sex characteristics, such as breasts, wider hips, pubic hair and armpit hair.

Estrogen also helps regulate the menstrual cycle, controlling the growth of the uterine lining during the first part of the cycle. If the woman's egg is not fertilized, estrogen levels decrease sharply and menstruation begins. If the egg is fertilized, estrogen works with progesterone, another hormone, to stop ovulation during pregnancy. During pregnancy, the placenta produces estrogen, specifically the hormone estriol. Estrogen controls lactation and other changes in the breasts, including at adolescence and during pregnancy.

Estrone, E1

Estrone is one of the three naturally occurring estrogens, the others being estradiol and estriol. Estrone is produced primarily from androstenedione originating from the gonads or the adrenal cortex. In premenopausal women, more than 50% of the estrone is secreted by the ovaries. In prepubertal children, men and non-supplemented postmenopausal women the major portion of estrone is derived from peripheral tissue conversion of androstenedione. Interconversion of estrone and estradiol also occurs in peripheral tissue. Bioassay

data indicate that the estrogenic action is much less than estradiol. Estrone is a primary estrogenic component of several pharmaceutical preparations, including those containing conjugated and esterified estrogens. In premenopausal women estrone levels generally parallel those of estradiol. After menopause estrone levels increase, possibly due to increased conversion of androstenedione to estrone.
E1 level is below the reference range. Estrogen levels can be reduced by inhibiting production using gonadotropin- releasing factor agonists (GnRH agonists) or blocking the aromatase enzyme using an aromatase inhibitor, or estrogen effects can be reduced with estrogen antagonists such as tamoxifen.

Estradiol · E2 、 Free Estradiol · Free E2
Estradiol is the most potent estrogen. In women estradiol is responsible for growth of the breast and reproductive epithelia, maturation of long bones and development of the secondary sexual characteristics. Estradiol is produced mainly by the ovaries with secondary production by the adrenal glands and conversion of steroid precursors into estrogens in fat tissue. Estradiol levels are used to assess fertility, amenorrhea and precocious puberty in girls.
Your E2 level is below the reference range. Low estradiol can cause a number of neurological and physical problems. Women with decreased amounts of the hormone often suffer from unexplained fatigue, difficulty sleeping, depression and severe mood swings. Since estradiol also plays a role in increasing the density of bone in women, low amounts of estradiol can result in the early onset of osteoporosis.
Your Free E2 level is below the reference range. Low estradiol can cause a number of neurological and physical problems. Women with decreased amounts of the hormone often suffer from unexplained fatigue, difficulty sleeping, depression and severe mood swings. Since estradiol also plays a role in increasing the density of bone in women, low amounts of estradiol can result in the early onset of osteoporosis.

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
Your E1/E2 level is within the reference range.

Estrogen dominance

P4 / E2 ratio · Progesterone / Estradiol ratio
Estrogen and progesterone work in synchronization with each other as a checkand-balance to achieve hormonal harmony in all our bodies. It is not the absolute quantities of estrogen or progesterone but rather the relative abundance of estrogen over progesterone that is the main cause of health problems when they are off balance. With the gradual drop in estrogen but severe drop in progesterone, there is insufficient progesterone to counteract the amount of estrogen in our body. The end result is excessive estrogen relative to progesterone, a condition we call estrogen dominance.

Premenopause Hormone Profile

Your P4/E2 level is below the reference range. Too much estrogen or too little progesterone will result in a condition we term estrogen dominance. As a result, the risks for breast and uterine cancer, fibrocystic breast disease, ovarian cysts, uterine fibroids, cervical erosions and/or dysplasia, and osteoporosis increase.

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 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.

Androgens

Androgens in Women

In women, androgens are produced in the ovaries, adrenal glands and fat cells. In fact, women may produce too much or too little of these hormones—disorders of androgen excess and deficiency are among the more common hormonal disorders in women.

In women, androgens play a key role in the hormonal cascade that kick-starts puberty, stimulating hair growth in the pubic and underarm areas. Additionally, these hormones are believed to regulate the function of many organs, including the reproductive tract, bone, kidneys, liver and muscle. In adult women, androgens are necessary for estrogen synthesis and have been shown to play a key role in the prevention of bone loss, as well as sexual desire and satisfaction.

Premenopause Hormone Profile

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).

Your DHEA level is within the reference range.

Androstenedione · A-dione

The steroid hormone Androstenedione is one of the main androgens, besides Testosterone and DHEA. Testosterone, the most important biological active androgen, is derived from peripheral enzymatic conversion of androstenedione. The highest levels are measured in the morning. At the age of puberty serum androstenedione levels rise, after menopause they decline again.

A-dione level is below the reference range. Androstenedione can have androgenic side effects that include acne, scalp hair loss, facial hair growth in women, aggressiveness, and irritability. Chronic use can also raise levels of estrogen, something that could lead to enlarged breasts and an increased risk of certain types of cancer.

Testosterone

Testosterone is considered a male hormone, but it plays an important role in the female body as well. Testosterone is responsible for maintaining muscle mass and bone strength and contributes to healthy sexual function. Testosterone levels gradually decrease with age, leaving many women to suffer from depression and lack of energy. Low testosterone also contributes to hormonal imbalances in the body which can cause polycystic ovarian syndrome and even infertility. Although women utilize relatively small amounts of testosterone compared to men, it is critical that an adequate amount is produced to ensure proper health.

Your Testosterone level is within the reference range.

Free-Testosterone · Bio-Testosterone

Although testosterone is a male hormone it is also a necessary hormone in the female body. In the female, the adrenal gland and the ovary are responsible for the synthesis of testosterone. Studies show that their main function is the control of female libido. Its concentration is the highest just prior to ovulation. When a woman is aged 40, the concentration of testosterone in the body is only half of what it was compared to a woman aged in her 20s. The decrease is even more pronounced in menopausal women.

Your Free Testosterone level is below the reference range. This may be related to ovarian or adrenal insufficiency. It should be interpreted according to the phase of your menstrual cycle. You should consider: 1. Herbal medicine: Siberian ginseng to enhance the adrenal functions, stinging nettle to increase the levels of testosterone, and Chinese ginseng to stimulate the effects of testosterone; 2. Use hormone replacement therapy.

Your Bio-Testosterone level is below the reference range. This may be related to ovarian or adrenal insufficiency. It should be interpreted according to the phase of your menstrual cycle. You should consider: 1. Herbal medicine: Siberian ginseng to enhance the adrenal functions, stinging nettle to increase the levels of testosterone, and Chinese ginseng to stimulate the effects of testosterone; 2. Use hormone replacement therapy.

Dihydrotestosterone · DHT

Dihydrotestosterone (DHT) is an androgen, similar to dehydroepiandrosterone, androstenedione and testosterone. Androgens circulate in the blood bound to proteins, especially sex hormone binding globulin (SHBG). Approximately 1 - 2 percent of these androgen steroids circulates in the unbound form in the blood and are referred to as the free or unbound androgens. Dihydrotestosterone has at least three times the binding affinity for SHBG than testosterone. In women, most of the dihydrotestosterone is derived from androstenedione. The major organ to metabolize androgens is the liver where the androgen steroid hormones undergo structural modifications that are generally regarded as prerequisites for their biological inactivation.

DHT 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 within the reference range.

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 above the reference range. An abnormal physiology response to stress, with shifting of steroidogenic pathway to cortisol at the expense of DHEA. The high Cortisol/DHEA ratio (similar to the shift seen in aging) also characterized the depressed group, Alzheimer's disease.

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 Estrogen Genomics, Estrogen Metabolism Health Profile, Xengoestrogen: phthalates, Parabens, Phenols, Cardiometabolic Health Profile, Adrenocortex Stress Profile, Tumor Marker, Liver Function Test, Renal Function Test, and Blood Routine.
2. Cancer Prevention and Health Promotion - indole-3-carbinol(I3C), Diindolylmethane(DIM).
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 ***