VibrantWellness

URINARY HORMONES

Urinary Hormones

Analyze your hormones and their metabolites

1(866) 364-0963
support@vibrant-wellness.com

www.vibrant-wellness.com

1360 Bayport Ave. Ste. B
San Carlos, CA 94070

Hormones

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Final Report Date:	10-26-2019 21:53	Specimen Collected:	10-20-2019 08:00
Accession ID:	1512010000	Specimen Received:	10-22-2019 09:00

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
TESTNAME	PATIENT	FEMALE	1989-02-23	1512010000	10-22-2019

PATIENT

Name: PATIENT TESTNAME
Date of Birth: 1989-02-23
Gender: Female
Age: 30

Telephone #: test@vibrantsci.com
Street Address: 1021 HOWARD AVENUE SUITE B
City: SAN CARLOS
State: CA Zip #: 94070

Fasting: FASTING No. of hours: 12.0

PROVIDER

Practice Name: Vibrant IT4 Practice
Provider Name: Vibrant IT4, MD (999999)
Phlebotomist:
Street Address: 999999 PRACTICE STREET AVE
City: SAN CARLOS
State: CA
Zip #: 94404
Telephone #: 666-666-6662
Fax #: 111-222-0000

For doctor's reference

Vibrant Wellness is pleased to present to you, **'Urinary Hormones'**, to help you make healthy lifestyle, dietary and treatment choices in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being.

The Vibrant Urinary Hormones is a test to measure urinary hormones including estrogens, androgens, progesterogens, glucocorticoids and oxidative stress. The panel is designed to give a complete picture of an individual's levels of hormones and their metabolites in urine.

Interpretation of Report: The report contains the complete list of the all urine hormones tested with quantitative results to enable a full overview along with the corresponding reference ranges. The classification of Red indicates a result that is outside the reference range and the classification of Green denotes a result that is within the reference range. Additionally, the previous value is also indicated to help check for improvements every time the test is ordered. Diurnal results are also provided for specific tests which comprises of the results of the analyte across a day with four samples collected and is also represented in a graphical format indicating the levels of the analyte variation within a day along with corresponding reference ranges. All contents provided are purely for informational purposes only and should not be considered medical advice. Any changes based on these choices are to be made in consultation with the clinical provider.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the Urinary Hormones panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to accept these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your physician for medication, treatment, diet, exercise or lifestyle management as appropriate. This product is not intended to diagnose, treat, or cure any disease or condition.

Please Note - It is important that you discuss any modifications to your diet, exercise and nutritional supplementation with your physician before making any changes.

To schedule an appointment with Vibrant Clinical Dietitians please call: Toll-Free 866-364-0963.

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FULL NAME: **PATIENT TESTNAME** ACCESSSION ID: **1512010000** DATE OF SERVICE: **10-22-2019**

Test Name	Current Result	Previous Result	Ref. Range
URINARY ESTROGENS (G/G CR)			
Estradiol (E2)	1.1	1.35	0.84-1.82 mcg/g Cr
Estrone (E1)	1.2	1.0	2.1-5.42 mcg/g Cr
Estriol (E3)	1.56	1.23	0.67-2.15 mcg/g Cr
E3/(E1+E2) Ratio	0.1	0.14	0-0.3
2-OH Estradiol	0.5	0.3	0.2-0.8 mcg/g Cr
2-OH Estrone	1.69	1.32	0.65-2.98 mcg/g Cr
4-OH Estradiol	0.1	0.09	0.11-0.22 mcg/g Cr
4-OH Estrone	0.45	0.41	0.19-0.58 mcg/g Cr
16a-OH Estrone	0.54	0.69	0.31-1.17 mcg/g Cr
2-OH (E1 + E2)/16a-OH E1	3.4	3.2	1.5-6
2-MeO Estradiol	0.03	0.05	0.02-0.09 mcg/g Cr
2-MeO Estrone	0.56	0.61	0.32-0.82 mcg/g Cr
2-MeO E1/2-OH E1	0.25	0.32	0.2-0.4
4-MeO Estradiol	0.01	0.04	0-0.05 mcg/g Cr
4-MeO Estrone	0.1	0.3	0-0.05 mcg/g Cr
4-MeO E1/4-OH E1	0.1	0.09	0.04-0.15
4-MeO E2/4-OH E2	0.24	0.30	0.13-0.33
Bisphenol A	3.5	3.2	2-6.2 mcg/g Cr
Total Estrogen	15.1	16.7	7.41-22.35 mcg/g Cr
URINARY ANDROGENS (G/G CR)			
DHEA	35.11	34.12	6.77-42.11 mcg/g Cr
Androstenedione	5.77	5.34	2.58-7.44 mcg/g Cr
Androsterone	200.4	200.3	142.6-500.8 mcg/g Cr
Etiocholanolone	155	153	260.3-805.1 mcg/g Cr
Testosterone (T)	2.15	2.19	0.78-3.11 mcg/g Cr
Epi-Testosterone (Epi-T)	0.75	0.77	0.35-1.25 mcg/g Cr
T/Epi-T	0.2	0.3	0.5-3
5a-DHT	0.92	0.98	0.34-1.05 mcg/g Cr

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Test Name	Current Result	Previous Result	Ref. Range
DHEA-S	4.1	3.8	5.22-31.78 mcg/g Cr
5a,3a-Androstanediol	7.4	7.2	2.46-8.59 mcg/g Cr
5b-Androstanediol	12.2	12.6	4.15-15.66 mcg/g Cr
URINARY PROGESTOGENS (G/G CR)			
b-Pregnanediol	503.2	501.9	450.8-1748.2 mcg/g Cr
a-Pregnanediol	230.1	233.2	120.3-499.8 mcg/g Cr
Allopregnanolone	1.24	1.28	2.57-19.88 mcg/g Cr
Allopregnanediol	56.1	56.7	12.33-70.12 mcg/g Cr
3αDihydroprogesterone	1.5	1.6	0.72-2.5 mcg/g Cr
20αDihydroprogesterone	3.21	3.33	4.11-12.68 mcg/g Cr
b-Pregnanediol/E2	200.19	203.43	536.67-960.55 Cr
URINARY GLUCOCORTICOIDS			
Total Cortisol	23.34	23.45	11.98-29.63 mcg/g Cr
Total Cortisone	41.23	41.78	24.33-45.36 mcg/g Cr
Cortisol/Cortisone	0.56	0.52	0.49-0.65 mcg/g Cr
b-Tetrahydrocortisol (b-THF)	304.91	3.5.62	200.65-500.78 mcg/g Cr
a-Tetrahydrocortisol (a-THF)	43.12	42.91	10.11-67.15 mcg/g Cr
b-Tetrahydrocortisone (b-THE)	609.32	609.54	400.78-1278.95 mcg/g Cr
Metabolized Cortisol (THF+THE)	981.3	984.99	611.54-1846.88 mcg/g Cr
Deoxycorticosterone	1.18	1.15	0.65-2.18 mcg/g Cr
Corticosterone	9.01	9.57	3.66-10.12 mcg/g Cr
OXIDATIVE STRESS			
8-OHdG	3.12	3.45	0-4.77 mcg/g Cr
URINARY FREE DIURNAL CORTISOL (G/G CR)			
Free Cortisol (1st Morning)	21.3	21.5	7.5-36.2 mcg/g Cr
Free Cortisol (2nd Morning)	61.4	61.2	24.9-66.4 mcg/g Cr
Free Cortisol (Evening)	8.3	8.7	6.1-18.9 mcg/g Cr
Free Cortisol (Night)	5.7	5.6	3.2-9.2 mcg/g Cr

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Test Name	Current Result	Previous Result	Ref. Range
Free Cortisol (pooled)	12.42	12.44	10.43-32.68 mcg/g Cr
URINARY FREE DIURNAL CORTISONE			
Free Cortisone (1st Morning)	56.8	57.0	32.7-95.8 mcg/g Cr
Free Cortisone (2nd Morning)	169.2	169.4	63.1-179.2 mcg/g Cr
Free Cortisone (Evening)	54.9	54.3	34.5-95.6 mcg/g Cr
Free Cortisone (Night)	14.5	14.7	11.2-40.9 mcg/g Cr
Free Cortisone (pooled)	78.3	78.6	35.38-102.88 mcg/g Cr
URINARY DIURNAL MELATONIN MT6S			
Melatonin (1st Morning)	24.5	24.3	17.5-40.2 mcg/g Cr
Melatonin (2nd Morning)	16.5	16.8	7.1-32.6 mcg/g Cr
Melatonin (Evening)	1.35	1.87	0.87-2 mcg/g Cr
Melatonin (Night)	11.2	11.0	1.9-12.3 mcg/g Cr
Melatonin (pooled)	14.6	14.8	6.84-21.78 mcg/g Cr
URINARY CREATININE			
Creatinine (1st Morning)	1.4	1.2	0.25-2.16 mcg/g Cr
Creatinine (2nd Morning)	2.1	2.0	0.25-2.16 mcg/g Cr
Creatinine (Evening)	0.75	0.78	0.25-2.16 mcg/g Cr
Creatinine (Night)	1.2	1.7	0.25-2.16 mcg/g Cr
Creatinine (pooled)	0.92	0.90	0.25-2.16 mcg/g Cr

PATIENT REPORTED THERAPEUTIC INTERVENTIONS

12.5mg topical Progesterone (compounded) (1 Days Last used); oral Iodine/Iodide (OTC) (1 Days Last used); oral Vitamin D3 (OTC) (1 Days Last used); oral Vitamin D (unknown type) (OTC) (1 Days Last used)

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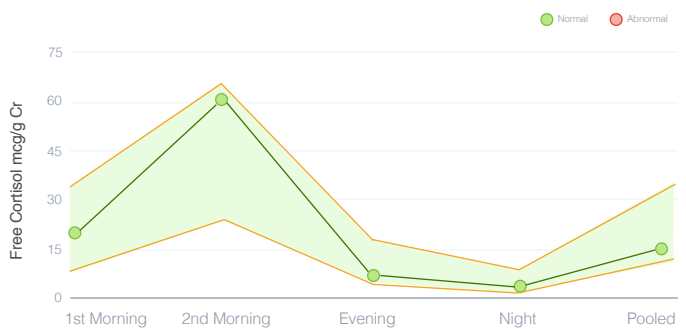
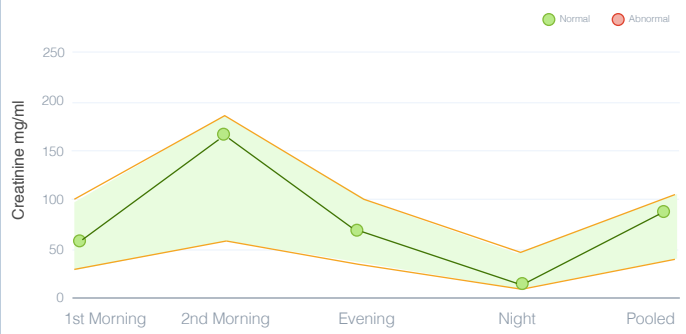
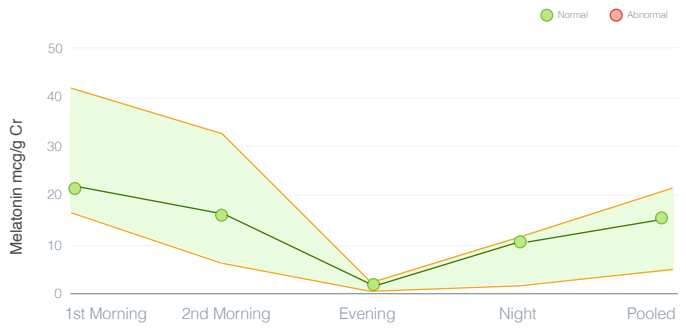
URINARY FREE DIURNAL CORTISOL (G/G CR)



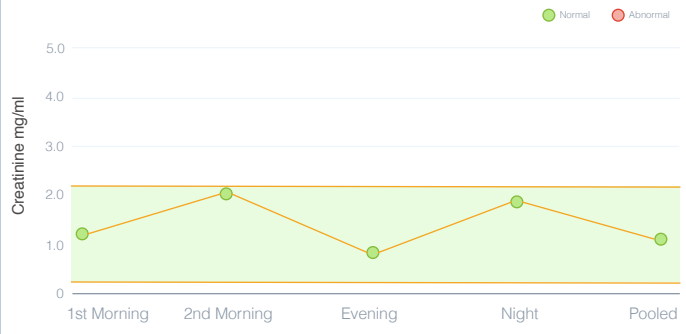
URINARY FREE DIURNAL CORTISONE



URINARY DIURNAL MELATONIN MT6S



URINARY CREATININE



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Estradiol

Estradiol is an estrogen steroid hormone and the major female sex hormone. It is involved in the regulation of the estrous and menstrual female reproductive cycles. Estradiol is responsible for the development of female secondary sexual characteristics such as the breasts, widening of the hips, and a female-associated pattern of fat distribution and is important in the development and maintenance of female reproductive tissues such as the mammary glands, uterus, and vagina during puberty, adulthood, and pregnancy. It also has important effects in many other tissues including bone, fat, skin, liver, and the brain. Though estradiol levels in males are much lower compared to those in females, estradiol has important roles in males as well. Levels of estradiol in premenopausal women are highly variable throughout the menstrual cycle and reference ranges widely vary from source to source.[1]

Estrone

Estrone is a steroid, a weak estrogen, and a minor female sex hormone. It is one of three major endogenous estrogens, the others being estradiol and estriol. Estrone, as well as the other estrogens, are synthesized from cholesterol and secreted mainly from the gonads, though they can also be formed from adrenal androgens in adipose tissue. Relative to estradiol, both estrone and estriol have far weaker activity as estrogens. Estrone can be converted into estradiol and serves mainly as a precursor or metabolic intermediate of estradiol.[2]

Estriol

Estriol is a steroid, a weak estrogen, and a minor female sex hormone. It is one of three major endogenous estrogens, the others being estradiol and estrone. Levels of estriol in women who are not pregnant are almost undetectable. However, during pregnancy, estriol is synthesized in very high quantities by the placenta and is the most produced estrogen in the body by far, although circulating levels of estriol are similar to those of other estrogens due to a relatively high rate of metabolism and excretion. Relative to estradiol, both estriol and estrone have far weaker activity as estrogens. In addition to its role as a natural hormone, estriol is used as a medication, for instance in menopausal hormone therapy.[3]

Total Estrogen

Estrogen is the primary female sex hormone. It is responsible for the development and regulation of the female reproductive system and secondary sex characteristics. There are three major endogenous estrogens in females that have estrogenic hormonal activity: estrone, estradiol, and estriol. The estrane steroid estradiol is the most potent and prevalent of these. In addition to their role as natural hormones, estrogens are used as medications, for instance in menopausal hormone therapy and hormonal birth control.[4]

2-OH Estradiol

The hydroxylation of estradiol is one of the major routes of metabolism of the estrogen steroid hormone estradiol. It is hydroxylated into the catechol estrogens 2-hydroxyestradiol and 4-hydroxyestradiol and into estriol (16α-hydroxyestradiol). 2-hydroxyestradiol metabolite has several physiological consequences: the ability to influence intracellular signaling, adenohypophyseal hormone secretion, radical and quinone formation and inhibition of tumor formation.[5]

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2-OH Estrone

2-Hydroxyestrone (2-OHE1) is an endogenous, naturally occurring catechol estrogen and a major metabolite of estrone. It is formed irreversibly from estrone in the liver and to a lesser extent in other tissues via 2-hydroxylation. It is not significantly uterotrophic in bioassays, compared to other hydroxylated estrogen metabolites including 2-hydroxyestradiol, 16α-hydroxyestrone, estriol (16α-hydroxyestradiol), 4-hydroxyestradiol, and 4-hydroxyestrone.[6]

4-OH Estradiol

The hydroxylation of estradiol is one of the major routes of metabolism of the estrogen steroid hormone estradiol. It is hydroxylated into the catechol estrogens 2-hydroxyestradiol and 4-hydroxyestradiol and into estriol (16α-hydroxyestradiol). 4-hydroxyestradiol (4-OH-E2), like 2-OH-E2, can be physiologically active as well as tumorigenic. 4-OH-E2 is capable of binding estrogen receptors with a reduced dissociation rate and prolonged activation, thereby inducing cellular growth and proliferation, adenohypophyseal hormone secretion, and prostaglandin production.[7]

4-OH Estrone

The production of 4-OH-E1 is a minor pathway of estrogen metabolism. It has the potential to enhance cancer development by directly damaging DNA and causing breaks in the molecular strands of DNA. Human breast cancer tissue produces much higher levels of 4-OH-E1 than 2-OH-E1, while normal breast tissue produces approximately equal amounts of the two metabolites. Furthermore, the 4-Hydroxyestrones have the ability to convert to metabolites that react with DNA and cause mutations that can be carcinogenic. It is also present in greater quantities in patients deficient in methionine and folic acid. Women who have uterine fibroids also may have increased levels of 4-Hydroxyestrones.[8]

16α-OH Estrone

16α-Hydroxyestrone (16α-OH-E1) is an endogenous steroidal estrogen and a major metabolite of estrone, as well as an intermediate in the biosynthesis of estriol. 16α-hydroxyestrone may help to protect against osteoporosis. In contrast to estradiol, the binding of 16α-hydroxyestrone to the estrogen receptor is, uniquely, covalent and irreversible, and genotoxicity and aberrant hyperproliferations may result.[6]

2-MeO Estradiol

2-Methoxyestradiol (2-MeOE2) is a natural metabolite of estradiol. Estriol is a steroid, a weak estrogen, and a minor female sex hormone. It is one of three major endogenous estrogens, the others being estradiol and estrone. Levels of estriol in women who are not pregnant are almost undetectable. However, during pregnancy, estriol is synthesized in very high quantities by the placenta and is the most produced estrogen in the body by far, although circulating levels of estriol are similar to those of other estrogens due to a relatively high rate of metabolism and excretion. Relative to estradiol, both estriol and estrone have far weaker activity as estrogens. In addition to its role as a natural hormone, estriol is used as a medication, for instance in menopausal hormone therapy.[9]

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2-MeO Estrone

2-Methoxyestrone (2-ME1) is an endogenous, naturally occurring methoxylated catechol estrogen and metabolite of estrone that is formed by catechol O-methyltransferase via the intermediate 2-hydroxyestrone.10 Estrone is a steroid, a weak estrogen, and a minor female sex hormone. It is one of three major endogenous estrogens, the others being estradiol and estriol. Estrone, as well as the other estrogens, are synthesized from cholesterol and secreted mainly from the gonads, though they can also be formed from adrenal androgens in adipose tissue. Relative to estradiol, both estrone and estriol have far weaker activity as estrogens. Estrone can be converted into estradiol and serves mainly as a precursor or metabolic intermediate of estradiol.[2]

4-MeO Estradiol

4-Methoxyestradiol (4-ME2) is an endogenous, naturally occurring methoxylated catechol estrogen and metabolite of estradiol that is formed by catechol O-methyltransferase via the intermediate 4-hydroxyestradiol. It has estrogenic activity similarly to estrone and 4-hydroxyestrone. Estradiol is an estrogen steroid hormone and the major female sex hormone. It is involved in the regulation of the estrous and menstrual female reproductive cycles. Estradiol is responsible for the development of female secondary sexual characteristics such as the breasts, widening of the hips, and a female-associated pattern of fat distribution and is important in the development and maintenance of female reproductive tissues such as the mammary glands, uterus, and vagina during puberty, adulthood, and pregnancy. It also has important effects in many other tissues including bone, fat, skin, liver, and the brain. Though estradiol levels in males are much lower compared to those in females, estradiol has important roles in males as well. Levels of estradiol in premenopausal women are highly variable throughout the menstrual cycle and reference ranges widely vary from source to source.[1]

4-MeO Estrone

4-Methoxyestrone (4-ME1) is an endogenous, naturally occurring methoxylated catechol estrogen and metabolite of estrone that is formed by catechol O-methyltransferase via the intermediate 4-hydroxyestrone. It has estrogenic activity similarly to estrone and 4-hydroxyestrone. Estrone is a steroid, a weak estrogen, and a minor female sex hormone. It is one of three major endogenous estrogens, the others being estradiol and estriol. Estrone, as well as the other estrogens, are synthesized from cholesterol and secreted mainly from the gonads, though they can also be formed from adrenal androgens in adipose tissue. Relative to estradiol, both estrone and estriol have far weaker activity as estrogens. Estrone can be converted into estradiol and serves mainly as a precursor or metabolic intermediate of estradiol.[2]

Bisphenol A

Bisphenol A (BPA) is a xenoestrogen, exhibiting estrogen-mimicking, hormone-like properties that raise concern about its suitability in some consumer products and food containers. Bisphenol A (BPA) is an organic synthetic compound and it is a starting material for the synthesis of plastics, primarily certain polycarbonates and epoxy resins, as well as some polysulfones and certain niche materials. BPA is an endocrine-disrupting chemical that has been found to bind to both of the nuclear estrogen receptors. A recent exposure to plastic that released excessive amounts of BPA into a food or a beverage could be identified by high levels of urinary BPA.[11]

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Progesterone

Progesterone is an endogenous steroid and progestogen sex hormone involved in the menstrual cycle, pregnancy, and embryogenesis of humans. It belongs to a group of steroid hormones called the progestogens and is the major progestogen in the body. Progesterone has a variety of important functions in the body. It is also a crucial metabolic intermediate in the production of other endogenous steroids, including the sex hormones and the corticosteroids, and plays an important role in brain function as a neurosteroid. In addition to its role as a natural hormone, progesterone is used as a medication, for instance in menopausal hormone therapy.[12]

b-Pregnanediol

b-Pregnanediol is a metabolite of the molecule of progesterone, which is important for fertility and for menstruation.[13] Pregnanediol levels increase after ovulation and when the placenta releases the hormone.[13] Low progesterone symptoms include hot flashes, vaginal dryness, mood instability, low sex drive, sleep problems, brain fog, hair loss, loss of muscle mass and strength, weight gain and anxiety.

a-Pregnanediol

This test measures pregnanediol, a metabolite of progesterone. It is used in the evaluation and decision making in women who are having difficulty becoming pregnant or maintaining a pregnancy. It is also used to monitor “high-risk” pregnancies. Pregnanediol is the most easily measured metabolite of progesterone. Urinary pregnanediol is measured to evaluate progesterone production by the ovaries and placenta. The main effect of progesterone is on the endometrium. It initiates the secretory phase of the endometrium in anticipation of implantation of a fertilized ovum. Both serum progesterone levels and urine concentration of progesterone metabolites (pregnanediol and others) are significantly increased during the second half of an ovulatory cycle.[14]

Allopregnanolone

Allopregnanolone, also known as brexanolone, is a medication and a naturally produced steroid that acts on the brain. Allopregnanolone possesses a wide variety of effects, including, in no particular order, antidepressant, anxiolytic, stress-reducing, rewarding, prosocial, antiaggressive, prosexual, sedative, pro-sleep, cognitive, memory-impairment, analgesic, anesthetic, anticonvulsant, neuroprotective, and neurogenic effects. Fluctuations in the levels of allopregnanolone and the other neurosteroids seem to play an important role in the pathophysiology of mood, anxiety, premenstrual syndrome, catamenial epilepsy, and various other neuropsychiatric conditions.[15]

Allopregnanediol

Allopregnanediol, or 5α-pregnane-3α,20α-diol, is an endogenous metabolite of progesterone and allopregnanolone and an isomer of pregnanediol. Progesterone is an endogenous steroid and progestogen sex hormone involved in the menstrual cycle, pregnancy, and embryogenesis of humans. It belongs to a group of steroid hormones called the progestogens and is the major progestogen in the body. Progesterone has a variety of important functions in the body. It is also a crucial metabolic intermediate in the production of other endogenous steroids, including the sex hormones and the corticosteroids, and plays an important role in brain function as a neurosteroid. In addition to its role as a natural hormone, progesterone is used as a medication, for instance in menopausal hormone therapy.[16]

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3α-Dihydroprogesterone

3α-Dihydroprogesterone (3α-DHP), also known as 3α-hydroxyprogesterone, is an endogenous neurosteroid. It is biosynthesized by 3α-hydroxysteroid dehydrogenase from progesterone. 3α-DHP has been found to act as a positive allosteric modulator of the GABAA receptor and is described as being as active as allopregnanolone in regard to this action. In accordance, it has anxiolytic effects in animals. 3α-DHP has also been found to inhibit the secretion of follicle-stimulating hormone (FSH) from the rat pituitary gland, demonstrating possible antigonadotrophic properties.[17]

20α-Dihydroprogesterone

20α-Dihydroprogesterone (20α-DHP), also known as 20α-hydroxyprogesterone (20α-OHP), is a naturally occurring, endogenous progestogen. It is a metabolite of progesterone, formed by the 20α-hydroxysteroid dehydrogenases (20α-HSDs). 20α-DHP can be transformed back into progesterone by 20α-HSDs. 20α-DHP has very low affinity for the progesterone receptor and is much less potent as a progestogen in comparison to progesterone.[18]

Deoxycorticosterone

Deoxycorticosterone (DOC) is a steroid hormone synthesized in the adrenal gland and is a precursor for the synthesis of cortisol and aldosterone. The levels of DOC of pregnant women are extraordinarily high compared with those in men and nonpregnant women. The major diagnostic utility of measurement of steroid synthesis intermediates such as Deoxycorticosterone is in diagnosing disorders of steroid synthesis.[19]

Corticosterone

Corticosterone, also known as 17-deoxycortisol, is a steroid hormone of the corticosteroid type produced in the cortex of the adrenal glands. Corticosterone has multiple effects on memory. The main effects are seen through the impact of stress on emotional memories as well as long term memory. With emotional memories, corticosterone is largely associated with fear memory recognition. Not only does corticosterone have effects on emotional memories but memory recognition and consolidation as well.[20]

DHEA

Dehydroepiandrosterone (DHEA), also known as androstenolone, is an endogenous steroid hormone. It is one of the most abundant circulating steroids in humans, that is produced in the adrenal glands, the gonads, and the brain. It functions as a metabolic intermediate in the biosynthesis of the androgen and estrogen sex steroids both in the gonads and in various other tissues.[21] However, DHEA also act as a neurosteroid and modulator of neurotrophic factor receptors. In addition to its affinity for the androgen receptor, DHEA has also been found to bind to and activate the estrogen receptors.[22,23] DHEA may be beneficial in slowing the aging process, treating depression, improve bone mineral density, vaginal atrophy.

Hormones

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Androstenedione

Androstenedione is an endogenous androgen steroid hormone and intermediate in the biosynthesis of estrone and of testosterone from dehydroepiandrosterone (DHEA). It is closely related to androstenediol. Androstenedione has been found to possess some estrogenic activity, similarly to other DHEA metabolites.[24] However, in contrast to androstenediol, its affinity for the estrogen receptors is very low.

Androsterone

Androsterone is an endogenous steroid hormone, neurosteroid, and putative pheromone. Androsterone is a metabolite of testosterone and dihydrotestosterone (DHT) with a less potency compared to testosterone. Androsterone is also known to be an inhibitory androstane neurosteroid, acting as a positive allosteric modulator of the GABAA receptor, and possesses anticonvulsant effects.[25,26]Androsterone is found in the human axilla, skin and in the urine. It may also be secreted by human sebaceous glands.

Etiocholanolone

Etiocholanolone is an etiocholane steroid that is produced from the metabolism of testosterone. It causes fever, immunostimulation, and leukocytosis, and is used to evaluate adrenal cortex function, bone marrow performance, and in neoplastic disease to stimulate the immune system. Etiocholanolone is also known to be an inhibitory androstane neurosteroid, acting as a positive allosteric modulator of the GABAA receptor, and possesses anticonvulsant effects.[27]

Testosterone

Testosterone is the primary male sex hormone and an anabolic steroid. In male humans, testosterone plays a key role in the development of male reproductive tissues such as testes and prostate, as well as promoting secondary sexual characteristics such as increased muscle and bone mass, and the growth of body hair. In addition, testosterone is involved in health and well-being, and the prevention of osteoporosis.[28]Insufficient levels of testosterone in men may lead to abnormalities including frailty and bone loss. It is biosynthesized in several steps from cholesterol and is converted in the liver to inactive metabolites. It exerts its action through binding to and activation of the androgen receptor. In humans and most other vertebrates, testosterone is secreted primarily by the testicles of males and, to a lesser extent, the ovaries of females. The conjugates of testosterone and its hepatic metabolites are released from the liver into circulation and excreted in the urine and bile. Only a small fraction (2%) of testosterone is excreted unchanged in the urine under normal conditions.[29]

Epi-Testosterone

Epitestosterone, or isotestosterone is an endogenous steroid and an epimer of the androgen sex hormone testosterone. It is a weak competitive antagonist of the androgen receptor (AR). Structurally, epitestosterone differs from testosterone only in the configuration at the hydroxy-bearing carbon, C17.[30] Epitestosterone is believed to form in a similar way to testosterone; studies found that around 50% of epitestosterone production in human males can be ascribed to the testis, although the exact pathway of its formation is still the subject of research. It has been shown to accumulate in mammary cyst fluid and in the prostate.[31] Epitestosterone levels are typically highest in young males; however, by adulthood, most healthy males exhibit a testosterone to epitestosterone ratio (T/E ratio) of about 1:1.[32]

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T/Epi-T

Epitestosterone is the biologically inactive 17-alphahydroxy epimer of testosterone. The interconversion between epitestosterone and testosterone is assumed to be very small in man, and only an insignificant fraction of testosterone (a maximum of 1-2%) is metabolized to epitestosterone in the body. Most healthy males exhibit a testosterone to epitestosterone ratio (T/E ratio) in urine of about 1:1.[33]

5α-DHT

Dihydrotestosterone (DHT, 5α-dihydrotestosterone, 5α-DHT, androstanolone or stanolone) is an endogenous androgen sex steroid and hormone. The enzyme 5α-reductase catalyzes the formation of DHT from testosterone in certain tissues including the prostate gland, seminal vesicles, epididymides, skin, hair follicles, liver, and brain.[34] Relative to testosterone, DHT is considerably more potent as an agonist of the androgen receptor. In addition to its role as a natural hormone, DHT has been used as a medication, for instance in the treatment of low testosterone levels in men.[35] DHT is biologically important for sexual differentiation of the male genitalia during embryogenesis, maturation of the penis and scrotum at puberty, growth of facial, body, and pubic hair, and development and maintenance of the prostate gland and seminal vesicles. DHT is considered to be the major androgen of the prostate gland.

5α,3α-Androstanediol

3α-Androstanediol (often abbreviated as 3α-diol), also known as 5α-androstane-3α,17β-diol, is an endogenous inhibitory androstane neurosteroid and a weak androgen, and a major metabolite of dihydrotestosterone (DHT). As a neurosteroid, it acts as a potent positive allosteric modulator of the GABAA receptor, and has been found to have rewarding, anxiolytic, pro-sexual, and anticonvulsant effects. Relative to its isomer 3β-androstanediol, which is a potent estrogen, 3α-androstanediol has substantially lower, though still significant affinity for the estrogen receptors.[36]

DHEA-S

Dehydroepiandrosterone sulfate, abbreviated as DHEA-S, also known as androstenolone sulfate, is an endogenous androstane steroid that is produced by the adrenal cortex. It is a metabolite of dehydroepiandrosterone (DHEA). The steroid is hormonally inert and is instead an important neurosteroid and neurotrophin.[37] Although DHEA-S itself is hormonally inert, it has been thought that it can be converted back into DHEA, which is weakly androgenic and estrogenic, and that DHEA in turn can be transformed into more potent androgens like testosterone and dihydrotestosterone (DHT) as well as estrogens like estradiol. DHEA-S is excreted in the urine via the kidneys. Women with hirsutism commonly present with mildly elevated DHEA-S levels. Common etiologies for hirsutism include ovarian dysfunction (polycystic ovary syndrome) and adrenal dysfunction (congenital adrenal hyperplasia, Cushing's syndrome).[38]

5β-Androstanediol

5β-Androstanediol, is an androgen metabolite derived from testosterone and androstanediol. The conversion of testosterone to urinary androstanediol is greater in normal men and hirsute women than in normal women. Measurement of urinary androstanediol, often in association with testosterone and/or androstenedione, is commonly used to study women with hyperandrogeneic syndrome. High levels of urinary androstanediols have been found in women with idiopathic hirsutism.[39]

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Cortisol

Cortisol is a steroid hormone, in the glucocorticoid class of hormones. It is increased in response to stress and low blood-glucose concentration. It functions to increase blood glucose levels through gluconeogenesis, to suppress the immune system, and to aid in the metabolism of fat, protein, and carbohydrates. It also decreases bone formation. Cortisol prevents the release of substances in the body that cause inflammation. Metabolized cortisol reflects the total cortisol produced and clearing through the liver, while free-cortisol results tell us how much cortisol is free to bind to receptors and allows for assessment of the circadian rhythm.[40]

Cortisone

Cortisol is a steroid hormone, in the glucocorticoid class of hormones. It is increased in response to stress and low blood-glucose concentration. It functions to increase blood glucose levels through gluconeogenesis, to suppress the immune system, and to aid in the metabolism of fat, protein, and carbohydrates. It also decreases bone formation. Cortisol Cortisone is a pregnane steroid hormone closely related to cortisol. It is one of the main hormones released by the adrenal gland in response to stress. Cortisone suppresses the immune system, thus reducing inflammation and attendant pain and swelling at the site of the injury. Risks exist, in particular in the long-term use of cortisone. Cortisone, a glucocorticoid, and epinephrine (adrenaline) are the main substances released by the body as a reaction to stress. They elevate blood pressure and prepare the body for a fight or flight response.prevents the release of substances in the body that cause inflammation. Metabolized cortisol reflects the total cortisol produced and clearing through the liver, while free-cortisol results tell us how much cortisol is free to bind to receptors and allows for assessment of the circadian rhythm.[41]

b-Tetrahydrocortisol (b-THF)

B-Tetrahydrocortisol (5-beta-Tetrahydrocortisol) is a metabolite of cortisol. Cortisol is metabolized into 5-alpha-Tetrahydrocortisol (5a-THF) and 5-beta-Tetrahydrocortisol (5b-THF). These will often reflect a chronic adrenal picture if levels are out of normal limits. Urine contains free cortisol, but it also contains many cortisol metabolites, like cortisone or 5-alpha- tetrahydrocortisol, 5-beta-tetrahydrocortisol, tetrahydrocortisone, etc. Metabolized cortisol reflects the total cortisol produced and clearing through the liver, while free-cortisol results tell us how much cortisol is free to bind to receptors and allows for assessment of the circadian rhythm.[42]

a-Tetrahydrocortisol (a-THF)

Tetrahydrocortisol (a-THF) is a metabolite of cortisol. Cortisol is metabolized into 5-alpha-Tetrahydrocortisol (5a-THF) and 5-beta-Tetrahydrocortisol (5b-THF). These will often reflect a chronic adrenal picture if levels are out of normal limits. Urine contains free cortisol, but it also contains many cortisol metabolites, like cortisone or 5-alpha- tetrahydrocortisol, 5-beta-tetrahydrocortisol, tetrahydrocortisone, etc. Metabolized cortisol reflects the total cortisol produced and clearing through the liver, while free-cortisol results tell us how much cortisol is free to bind to receptors and allows for assessment of the circadian rhythm.[42]

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b-Tetrahydrocortisone (b-THE)

b-Tetrahydrocortisone (b-THE) is an adrenal steroid and a cortisol metabolite. Tetrahydrocortison (THE) is a down-stream metabolite of cortisol and cortisone. Excess cortisol will result in high levels of urinary b-Tetrahydrocortisone (b-THE). Cortisone is a pregnane steroid hormone closely related to cortisol. It is one of the main hormones released by the adrenal gland in response to stress. Cortisone suppresses the immune system, thus reducing inflammation and attendant pain and swelling at the site of the injury. Risks exist, in particular in the long-term use of cortisone. Cortisone, a glucocorticoid, and epinephrine (adrenaline) are the main substances released by the body as a reaction to stress. They elevate blood pressure and prepare the body for a fight or flight response.[43] If there is excess cortisol to cortisone conversion or excess metabolization of cortisone, urinary levels of b-Tetrahydrocortisone (b-THE) will be high.[42]

8-OHdG

8-hydroxy-2'-deoxyguanosine (8-OHdG, or 8-oxodG) is a marker of oxidative stress. Urinary 8-OHdG, in particular, has been measured most frequently to indicate the extent of oxidative damage. guanine is most prone to oxidation. Guanine molecule, one of the four main nucleobases found in the nucleic acids DNA, oxidizes to produce the modified 8-OHdG which acts as one of the predominant forms of free radical-induced lesions of DNA. Oxidative modified DNA in the form of 8-OHdG can be quantified to indicate the extent of DNA damage.[42]

Melatonin

Cortisol is a steroid hormone, in the glucocorticoid class of hormones. It is increased in response to stress and low blood-glucose concentration. It functions to increase blood glucose levels through gluconeogenesis, to suppress the immune system, and to aid in the metabolism of fat, protein, and carbohydrates. It also decreases bone formation. Cortisol Cortisone is a pregnane steroid hormone closely related to cortisol. It is one of the main hormones released by the adrenal gland in response to stress. Cortisone suppresses the immune system, thus reducing inflammation and attendant pain and swelling at the site of the injury. Risks exist, in particular in the long-term use of cortisone. Cortisone, a glucocorticoid, and epinephrine (adrenaline) are the main substances released by the body as a reaction to stress. They elevate blood pressure and prepare the body for a fight or flight response.prevents the release of substances in the body that cause inflammation. Metabolized cortisol reflects the total cortisol produced and clearing through the liver, while free-cortisol results tell us how much cortisol is free to bind to receptors and allows for assessment of the circadian rhythm.[44]

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Citations/Sources

1. Wise PM, Suzuki S and Brown CM. Estradiol: a hormone with diverse and contradictory neuroprotective actions. Dialogues in clinical neuroscience. 2009; 11: 297-303.
2. Thomas MP and Potter BV. The structural biology of oestrogen metabolism. The Journal of steroid biochemistry and molecular biology. 2013; 137: 27-49.
3. Ali ES, Mangold C and Peiris AN. Estriol: emerging clinical benefits. Menopause. 2017; 24: 1081-5.
4. Nelson LR and Bulun SE. Estrogen production and action. J Am Acad Dermatol. 2001; 45: S116-24.
5. Liehr JG. Is estradiol a genotoxic mutagenic carcinogen? Endocr Rev. 2000; 21: 40-54.
6. Eliassen AH, Missmer SA, Tworoger SS and Hankinson SE. Circulating 2-hydroxy- and 16alpha-hydroxy estrone levels and risk of breast cancer among postmenopausal women. Cancer Epidemiol Biomarkers Prev. 2008; 17: 2029-35.
7. Cheng ZN, Shu Y, Liu ZQ, Wang LS, Ou-Yang DS and Zhou HH. Role of cytochrome P450 in estradiol metabolism in vitro. Acta pharmacologica Sinica. 2001; 22: 148-54.
8. Castagnetta LA, Granata OM, Traina A, et al. Tissue content of hydroxyestrogens in relation to survival of breast cancer patients. Clinical cancer research : an official journal of the American Association for Cancer Research. 2002; 8: 3146-55.
9. Sutherland TE, Schuliga M, Harris T, et al. 2-methoxyestradiol is an estrogen receptor agonist that supports tumor growth in murine xenograft models of breast cancer. Clinical cancer research : an official journal of the American Association for Cancer Research. 2005; 11: 1722-32.
10. Bhavnani BR, Nisker JA, Martin J, Aletebi F, Watson L and Milne JK. Comparison of pharmacokinetics of a conjugated equine estrogen preparation (premarin) and a synthetic mixture of estrogens (C.E.S.) in postmenopausal women. Journal of the Society for Gynecologic Investigation. 2000; 7: 175-83.
11. Jalal N, Surendranath AR, Pathak JL, Yu S and Chung CY. Bisphenol A (BPA) the mighty and the mutagenic. Toxicology reports. 2018; 5: 76-84.
12. Mesen TB and Young SL. Progesterone and the luteal phase: a requisite to reproduction. Obstet Gynecol Clin North Am. 2015; 42: 135-51.
13. Fauser BCJM. Chapter 30 - Medical Approaches to Ovarian Stimulation for Infertility. In: Strauss JF and Barbieri RL, (eds.). Yen and Jaffe's Reproductive Endocrinology (Eighth Edition). Philadelphia: Content Repository Only!, 2019, p. 743-78.e7.
14. Harlow SD, Windham GC and Paramsothy P. Chapter 12 - Menstruation and Menstrual Disorders: The Epidemiology of Menstruation and Menstrual Dysfunction. In: Goldman MB, Troisi R and Rexrode KM, (eds.). Women and Health (Second Edition). Academic Press, 2013, p. 163-77.
15. Backstrom T, Bixo M, Johansson M, et al. Allopregnanolone and mood disorders. Progress in neurobiology. 2014; 113: 88-94.
16. Jensen CC. Quantitative determination of urinary pregnanediol and allopregnanediol for clinical use. Acta Endocrinol (Copenh). 1955; 18: 281-7.
17. Dong E, Matsumoto K, Uzunova V, et al. Brain 5α-dihydroprogesterone and allopregnanolone synthesis in a mouse model of protracted social isolation. Proceedings of the National Academy of Sciences. 2001; 98: 2849-54.
18. Collins WP, Mansfield MD, Bridges CE and Sommerville IF. Studies on steroid metabolism in human endometrial tissue. Biochem J. 1969; 113: 399-407.
19. Casey ML and MacDonald PC. Metabolism of deoxycorticosterone and deoxycorticosterone sulfate in men and women. J Clin Invest. 1982; 70: 312-9.

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Citations/Sources

20. Albrecht A, Caliskan G, Oitzl MS, Heinemann U and Stork O. Long-lasting increase of corticosterone after fear memory reactivation: anxiolytic effects and network activity modulation in the ventral hippocampus. Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology. 2013; 38: 386-94.

21. Friess E, Schiffelholz T, Steckler T and Steiger A. Dehydroepiandrosterone--a neurosteroid. Eur J Clin Invest. 2000; 30 Suppl 3: 46-50.

22. Webb SJ, Geoghegan TE, Prough RA and Michael Miller KK. The biological actions of dehydroepiandrosterone involves multiple receptors. Drug metabolism reviews. 2006; 38: 89-116.

23. Chen F, Knecht K, Birzin E, et al. Direct agonist/antagonist functions of dehydroepiandrosterone. Endocrinology. 2005; 146: 4568-76.

24. Miller KK, Al-Rayyan N, Ivanova MM, et al. DHEA metabolites activate estrogen receptors alpha and beta. Steroids. 2013; 78: 15-25.

25. Reddy DS. Neurosteroids: endogenous role in the human brain and therapeutic potentials. Progress in brain research. 2010; 186: 113-37.

26. Kaminski RM, Marini H, Kim WJ and Rogawski MA. Anticonvulsant activity of androsterone and etiocholanolone. Epilepsia. 2005; 46: 819-27.

27. France JT, Rivera R, McNiven NL and Dorfman RI. DETERMINATION OF ANDROSTERONE, ETIOCHOLANOLONE AND DEHYDROEPIANDROSTERONE IN URINE BY GAS-LIQUID CHROMATOGRAPHY. Steroids. 1965; 10: 687-97.

28. Tuck S and Francis R. Testosterone, bone and osteoporosis. Frontiers of hormone research. 2009; 37: 123-32.

29. Ullah MI, Riche DM and Koch CA. Transdermal testosterone replacement therapy in men. Drug design, development and therapy. 2014; 8: 101-12.

30. Starka L, Bicikova M and Hampl R. Epitestosterone--an endogenous antiandrogen? Journal of steroid biochemistry. 1989; 33: 1019-21.

31. Dehennin L. Secretion by the human testis of epitestosterone, with its sulfoconjugate and precursor androgen 5-androstene-3 beta,17 alpha-diol. The Journal of steroid biochemistry and molecular biology. 1993; 44: 171-7.

32. Bellemare V, Faucher F, Breton R and Luu-The V. Characterization of 17alpha-hydroxysteroid dehydrogenase activity (17alpha-HSD) and its involvement in the biosynthesis of epitestosterone. BMC biochemistry. 2005; 6: 12.

33. KAPELRUD H, JOHANNESEN ø and OFTEBRO H. Testosterone/epitestosterone ratio in urine: a possible diagnostic tool in the disclosure of exogenous testosterone administration. Journal of Internal Medicine. 1992; 232: 453-5.

34. Marks LS. 5alpha-reductase: history and clinical importance. Reviews in urology. 2004; 6 Suppl 9: S11-21.

35. Coutts SB, Kicman AT, Hurst DT and Cowan DA. Intramuscular administration of 5 alpha-dihydrotestosterone heptanoate: changes in urinary hormone profile. Clin Chem. 1997; 43: 2091-8.

36. Frye CA, Edinger KL, Lephart ED and Walf AA. 3alpha-androstanediol, but not testosterone, attenuates age-related decrements in cognitive, anxiety, and depressive behavior of male rats. Front Aging Neurosci. 2010; 2: 15.

37. Prough RA, Clark BJ and Klinge CM. Novel mechanisms for DHEA action. Journal of molecular endocrinology. 2016; 56: R139-55.

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Citations/Sources

38. Sachdeva S. Hirsutism: evaluation and treatment. Indian J Dermatol. 2010; 55: 3-7.

39. Minut GJ, Cambie M, Lanzoni M, Marubini E and Secreto G. Urinary 5 alpha-androstanediol and 5 beta-androstanediol measurement by gas chromatography after solid-phase extraction and high-performance liquid chromatography. The International journal of biological markers. 1999; 14: 154-9.

40. Lee DY, Kim E and Choi MH. Technical and clinical aspects of cortisol as a biochemical marker of chronic stress. BMB reports. 2015; 48: 209-16.

41. Glyn J. The discovery and early use of cortisone. J R Soc Med. 1998; 91: 513-7.

42. Taniyama M, Honma K and Ban Y. Urinary cortisol metabolites in the assessment of peripheral thyroid hormone action: application for diagnosis of resistance to thyroid hormone. Thyroid. 1993; 3: 229-33.

43. Aranoff G and Rosler A. Urinary tetrahydrocortisone and tetrahydrocortisol glucosiduronates in normal newborns, children and adults. Acta Endocrinol (Copenh). 1980; 94: 371-5.

44. Tordjman S, Chokron S, Delorme R, et al. Melatonin: Pharmacology, Functions and Therapeutic Benefits. Current Neuropharmacology. 2017; 15: 434-43.

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Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America Clinical Laboratory, a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Vibrant Urinary Hormones panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a physician's clinical assessment.

Urinary Hormones testing is performed at Vibrant America, a CLIA certified laboratory and utilizes ISO-13485 developed technology. Vibrant America has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific antibody due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

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