SpectraCell Laboratories
Science + Health + Solutions

Hormone Balance Report

Jane Doe

Date Collected: 8/18/2016

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Hormone Balance Report

Patient Name:	Doe, Jane	Batch Number:	
Patient DOB:	6/9/1949	Accession Number:	
Gender:	F	Date Received:	8/19/2016
Physician:		Report Date:	8/24/2016

Test		Graph	Patient Results	Reference Range	
Estrone (E1)	pg/mL	0.0 75.0 150.0 225.0 300.0 result graph based on Luteal Phase	10.9	< 200 100 - 250 3 - 32 < 150 < 150	Luteal Phase Follicular Phase Postmenopausal Nonpregnant Follicular Phase - Early
Estradiol (E2)	pg/mL	0 75 150 225 300 result graph based on Luteal Phase	32	27 - 246 ND - 160 ND - 30 ND - 93 ND - 102	Luteal Phase Follicular Phase Postmenopausal Untreated Treated Postmenopausal Oral Contraceptives
Estriol, Unconjugated (UE3)	ng/mL	0.00 0.04 0.08 0.12 0.16	< 0.07	< 0.08	Nonpregnant
Luteinizing Hormone	mIU/mL	0.0 6.3 12.5 18.8 25.0+ result graph based on Luteal Phase	46.3	ND - 14.7 1.1 - 11.6 11.3 - 39.8 ND - 8.0	Luteal Phase Follicular Phase Postmenopausal Oral Contraceptives
Follicle Stimulating Hormone	mIU/mL	0.0 4.5 9.0 13.5 18.0+ result graph based on Luteal Phase	113.0	1.2 - 9.0 2.8 - 11.3 21.7 - 153.0 9.7 - 110.0 ND - 4.9	Luteal Phase Follicular Phase Postmenopausal Untreated Treated Postmenopausal Oral Contraceptives
Progesterone	ng/mL	0.0 10.0 20.0 30.0 40.0 result graph based on Luteal Phase	< 0.20	0.72 - 17.8 0.33 - 1.2 ND - 1.0 0.34 - 0.92	Luteal Phase Follicular Phase Postmenopausal Oral Contraceptives
Prolactin	ng/mL	0.0 6.3 12.5 18.8 25.0	4.5	1.9 - 23.1	
Testosterone, Total	ng/dL	0 23 45 68 90 result graph based on Ovulating	< 20	ND - 73 ND - 43	Ovulating Postmenopausal
Testosterone, Free (Calculation)	ng/dL	0.0 1.0 2.0 3.0 4.0	< 0.3	0.3 - 1.9	
SHBG	nmol/L	2 45 89 132 175	90	18 - 144	Nonpregnant
Androstenedione	ng/mL	0.0 1.3 2.5 3.8 5.0	0.6	0.3 - 3.3	
DHEA-S	µg/dL	0 125 250 375 500	112	35 - 430	
IGF-1	ng/mL	0 65 130 195 260	151	69 - 200	

Estrone (E1) performed at Sonic Reference Laboratory, Inc. 9200 Wall St., Suite 200, Austin, TX 78754 CLIA# 45D2083658

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Test Component		Flag	Result	Reference Range	Phase
Estrone (E1)	pg/mL		10.9	< 200	Luteal Phase
	result flag based on			100 - 250	Follicular Phase
				3 - 32	Postmenopausal
				< 150	Nonpregnant
				< 150	Follicular Phase - Early
Estradiol (E2)	pg/mL		32	27 - 246	Luteal Phase
	result flag based on			ND - 160	Follicular Phase
				ND - 30	Postmenopausal Untreated
				ND - 93	Treated Postmenopausal
				ND - 102	Oral Contraceptives
Estriol, Unconjugated (UE3)	ng/mL		< 0.07	< 0.08	Nonpregnant
Luteinizing Hormone	mIU/mL	H	46.3	ND - 14.7	Luteal Phase
	result flag based on			1.1 - 11.6	Follicular Phase
				11.3 - 39.8	Postmenopausal
				ND - 8.0	Oral Contraceptives
Follicle Stimulating Hormone	mIU/mL	H	113.0	1.2 - 9.0	Luteal Phase
	result flag based on			2.8 - 11.3	Follicular Phase
				21.7 - 153.0	Postmenopausal Untreated
				9.7 - 110.0	Treated Postmenopausal
				ND - 4.9	Oral Contraceptives
Progesterone	ng/mL	L	< 0.20	0.72 - 17.8	Luteal Phase
	result flag based on			0.33 - 1.2	Follicular Phase
				ND - 1.0	Postmenopausal
				0.34 - 0.92	Oral Contraceptives
Prolactin	ng/mL		4.5	1.9 - 23.1	
Testosterone, Total	ng/dL		< 20	ND - 73	Ovulating
	result flag based on			ND - 43	Postmenopausal
Testosterone, Free (Calculation)	ng/dL	L	< 0.3	0.3 - 1.9	
SHBG	nmol/L		90	18 - 144	Nonpregnant
Androstenedione	ng/mL		0.6	0.3 - 3.3	
DHEA-S	µg/dL		112	35 - 430	
IGF-1	ng/mL		151	69 - 200	

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Component Summaries

This information is provided for educational purposes.

Estradiol (E2)
The strongest estrogen, E2 protects blood vessels, increases high density lipoprotein cholesterol (HDL), prevents bone loss, helps form collagen which benefits the appearance of the skin, improves cognitive function and increases the immune response. However, estradiol also exerts a strong proliferative effect on hormone sensitive tissues like the breast, uterus and ovary so it must be properly balanced with progesterone and other estrogens to prevent the clinical manifestation of estrogen dominance.

Progesterone
Progesterone selectively balances the effects of estrogen in hormonally sensitive tissue (breast, uterine) as well as in the bones, brain, and skin. It decreases the immune response, promotes bone formation, protects the brain and tends to have a calming effect on mood. It is also a precursor hormone for other sex hormones as well as cortisol and interacts with thyroid hormones to regulate metabolism.

FSH (Follicle Stimulating Hormone)
FSH stimulates the production of estrogens and is a marker for ovarian function in women. Levels of FSH increase during both ovulation and during ovarian failure and is considered an appropriate test for determining menopausal status in women.

LH (Luteinizing Hormone)
LH is responsible for ovulation in premenopausal women and works synergistically with follicle stimulating hormone to ensure female fertility. LH surges mid-menstrual cycle in women and initiates the release of progesterone. It regulates estrogen production in the ovary and is largely affected by prolactin levels.

Prolactin
Prolactin is an inhibitory hormone that reduces the action of several other hormones. Most known for its ability to stimulate milk production in lactating women, it also regulates calcium metabolism and plays a role in the synthesis of nerve cells and prostaglandins, which are hormone-like substances that regulate inflammation and metabolic processes throughout the body.

IGF-1 (Insulin-like Growth Factor 1)
IGF-1 is an anabolic (tissue building) hormone that is similar in structure (not function) to insulin. Working intimately with growth hormone, IGF-1 causes cells to grow in several tissues throughout the body including muscle, bone, nerves, skin and various organs.

DHEA-S (Dehydroepiandrosterone sulfate)
The most abundant sex hormone in the body, DHEA-S is produced primarily in adrenal glands and is the main precursor hormone for androgens (estrogen & testosterone). DHEA-S enhances immunity, decreases autoimmunity, helps prevent cancer, and improves insulin sensitivity, cognitive function and bone health.

Testosterone
Although levels in women are 5-10% the amount found in men, testosterone is a potent steroid hormone that is clinically associated with increased muscle mass, libido, bone health and a general sense of well being in women. It can also be converted to estrogens and is regulated by LH and FSH. Only free, unbound testosterone is biologically active. Testosterone that is bound to SHBG is basically inert so free testosterone can be calculated if the amount of SHBG in the blood is also known.

Androstenedione
Androstenedione is made from DHEAS and is the immediate precursor hormone to testosterone and estrogen. (DHEAS → Androstenedione → Testosterone → Estrogen). Androstenedione occurs in equilibrium with testosterone so an increase in one usually increases the other.

SHBG (Sex Hormone Binding Globulin)
SHBG, which is regulated by other hormones, is a protein that binds estrogens and testosterone in the bloodstream where they are biologically inactive. Assists in regulation of estrogen and testosterone levels.

Estrone (E1)
This estrogen has very strong tissue proliferative effects and may be linked to estrogen dominant conditions like fibrocystic breasts, endometriosis and uterine fibroids. It will create either dangerous or beneficial metabolites, depending on a person's nutritional status.

Estriol, unconjugated (UE3)
Estriol is a weak estrogen that is very high during pregnancy, but also plays an important role in non-pregnant women by opposing the growth of cancer cells promoted by the stronger estrogens E1 and E2. Estriol is also known to alleviate menopausal symptoms such as hot flashes or urinary incontinence.

PSA Total (Prostate Specific Antigen)
PSA is a protein secreted by cells in the prostate gland. In healthy men, PSA is found in small amounts in the blood but is typically elevated in the presence of prostate inflammation, enlarged prostate (benign) or less commonly prostate cancer. It should be noted that many prostate cancers do not produce symptoms and may not necessarily evolve to aggressive cancer.