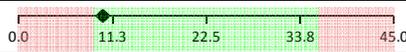
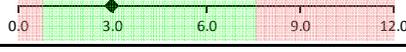
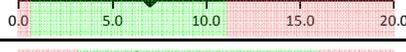
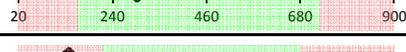
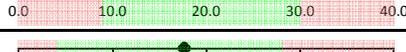
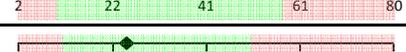
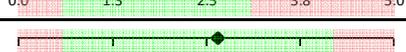
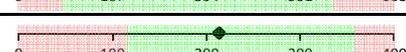
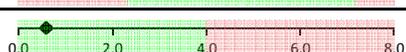
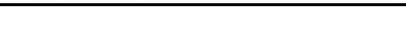


## Hormone Balance - Male Report

Patient Name: McGillick, Mitchell T  
 Patient DOB: 6/6/1991  
 Gender: M  
 Physician: Todd McGillick, DC

Batch Number: B6565  
 Accession Number: N97686  
 Date Received: 7/3/2015  
 Report Date: 7/9/2015

Test	Graph	Patient Results	Reference Range
Estrone (E1) (pg/mL)		10.1	9 - 36
Estradiol (E2) (pg/mL)		36	ND - 56
Luteinizing Hormone (mIU/mL)		3.0	0.8 - 7.6
Follicle Stimulating Hormone (mIU/mL)		7.0	0.7 - 11.1
Testosterone, Total (ng/dL)		298	160 - 726
Testosterone, Free (Calculation) (ng/dL)		5.4	9.0 - 30.0
SHBG (nmol/L)		36	10 - 57
Androstenedione (ng/mL)		1.4	0.6 - 3.1
DHEA-S (µg/dL)		355	80 - 560
IGF-1 (ng/mL)		214	116 - 358
PSA (ng/mL)		0.6	<= 4.0

## Hormone Balance - Male Report

### Component Summaries

*This information is provided for educational purposes.*

#### **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.

#### **Testosterone**

This potent steroid hormone is clinically associated with increased muscle mass, libido, bone health and a general sense of well being. It can be converted to estrogens and is regulated by FSH and LH. 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.

#### **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.

#### **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.

#### **Estradiol (E2)**

In men, small amounts of E2 are produced in the testes but estradiol is also formed by converting testosterone in a process called aromatization which occurs in fat cells. E2 plays a role in maintaining healthy sperm and symptoms of deficient or excess estradiol in men may manifest as symptoms of low testosterone because either there is not enough testosterone to convert to estradiol or too much testosterone is being converted to estradiol.

#### **FSH (Follicle Stimulating Hormone)**

In men, FSH initiates the testicular synthesis of sperm. Low levels in men can indicate hypogonadism (diminished sex hormones), infertility or problems with the pituitary gland. Excessive levels can indicate testicular failure due to injury, infection, tumor or radiation.

#### **LH (Luteinizing Hormone)**

In men, LH is important for healthy sperm production and function. Low levels in men can indicate hypogonadism (diminished sex hormones), infertility or problems with the pituitary gland. Excessive levels can indicate testicular failure due to injury, infection, tumor or radiation.

#### **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.

## Hormone Balance - Male Report

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 Patient DOB: 6/6/1991  
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Batch Number: B6565  
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