



Comprehensive Thyroid Plus Adrenal Report

Jane Doe

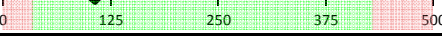
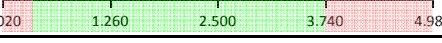
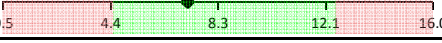
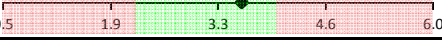
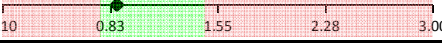
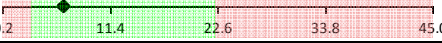
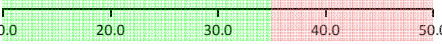
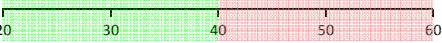
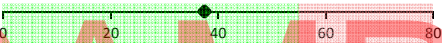
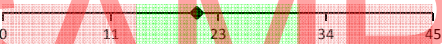
Date Collected: 2/13/2017

SAMPLE

Comprehensive Thyroid Plus Adrenal Report

Patient Name: Doe, Jane
 Patient DOB: 12/10/1960
 Gender: F
 Physician: Jon Doe, ND

Batch Number: B0000
 Accession Number: Q00000
 Date Received: 2/14/2017
 Report Date: 2/22/2017

Test			Patient Results	Reference Value
DHEA-S	µg/dL		107	35 - 430
TSH	µIU/mL		7.030	0.358 - 3.74
T4, Total	µg/dL		7.2	4.5 - 12.5
T3, Free	pg/mL		3.6	2.2 - 4.0
T4, Free	ng/dL		0.87	0.76 - 1.46
Cortisol	µg/dL		6.5	3.1 - 22.4
Anti-TPO Ab	IU/mL		> 1000.0	0.0 - 35.0
Anti-Thyroglobulin Ab	IU/mL		97	ND - 40
Thyroglobulin	ng/mL		38	<= 55
Thyroxine-binding globulin, TBG	µg/mL		20	14 - 31

SAMPLE

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 Physician: Jon Doe, ND

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Test Component	Flag	Result	Reference Range
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SAMPLE

Comprehensive Thyroid Plus Adrenal Report Component Summaries

This information is provided for educational purposes.

TSH (Thyroid Stimulating Hormone)

This hormone (also known as thyrotropin) tells the thyroid to increase or decrease production of T4 or conversion to T3 depending on the amounts of T4 and T3 circulating in the bloodstream via an efficient feedback system. Levels of TSH are high when thyroid function is poor or inefficient (hypothyroidism) because TSH is released by a gland in the brain (pituitary) in an effort to increase thyroid function by increasing T4 or T3. Conversely, low TSH is seen in an overactive thyroid (hyperthyroidism). TSH is often considered the main thyroid hormone for diagnosing hypo- or hyperthyroidism.

T4, Total (Total Thyroxine)

Most T4 in the blood is bound to carrier proteins which makes it biologically inactive. Total T4 includes unbound (free) T4 plus T4 that is bound to carrier proteins in the blood.

T4, Free (Free Thyroxine)

Considered a precursor hormone, T4 is converted into T3 as required by cells throughout the body. Generally, this conversion of T4 to T3 occurs outside the thyroid gland, typically in the liver and kidneys. Although T4 is more abundant in the blood than T3, it is much less potent.

T3, Free (Free Triiodothyronine)

T3 is the main thyroid hormone in terms of biological activity that regulates metabolism and growth throughout the body. It is more potent than T4 and directly affects the heart, blood vessels, bone, muscle and brain. T3 increases a person's metabolic rate, controls body temperature, regulates neurotransmitter synthesis (mood), impacts heart rate and oversees the conversion of food into energy.

Tg (Thyroglobulin)

The main function of Tg is to store iodine, which is a necessary nutrient for the production of thyroid hormones T3 and T4. This test is particularly useful when monitored over time versus a single measurement and can sometimes be a useful tumor marker in patients with previous thyroid cancer.

TBG (Thyroid Binding Globulin)

TBG is a carrier protein for thyroid hormones so its role is to transport T4 and T3 through the bloodstream. The thyroid gland adjusts to changing levels of TBG in order to keep free T4 constant and it is particularly useful when thyroid (T4) levels do not necessarily correlate with clinical symptoms. TBG levels are largely affected by other hormones and many prescription drugs and is useful in diagnosing the reason behind abnormal thyroid hormone levels.

Anti-Tg (Antibodies to Thyroglobulin)

If antibodies to the protein thyroglobulin (a precursor to T4) are present in significant amounts, this suggests an abnormal immune response against your own body, also called autoimmunity. Specifically, anti-Tg suggests a person's immune system is attacking healthy tissue – in this case, the protein precursor to thyroid hormone.

Anti-TPO (Antibodies to Thyroperoxidase)

Thyroperoxidase (TPO) is an enzyme that initiates the synthesis of T4. Antibodies to TPO indicate autoimmunity where the body is attacking normal proteins in the blood (in this case, TPO). People with anti-TPO have a higher chance of developing hypothyroidism that those who do not have antibodies to TPO.

DHEA-S

Dehydroepiandrosterone sulfate (DHEA-S) – the most abundant sex hormone in the body, DHEA-S (the sulfated, or bioavailable form of DHEA), is produced by the adrenal glands and is the precursor hormone to testosterone and estrogens. DHEA-S enhances immunity, reduces autoimmunity, helps prevent cancer, and improves insulin sensitivity, bone health and cognitive function.

Cortisol

This steroid hormone is secreted by the adrenal glands in response to physical or psychological stress. The short-term effects of cortisol help muscles use glucose for immediate energy but prolonged cortisol secretion negatively alters blood sugar and fat metabolism and may predispose a person toward insulin resistance. Cortisol suppresses the immune system, increases blood pressure, reduces bone formation and inhibits anabolic (tissue building) functions such as collagen synthesis. Significant fluctuations in cortisol levels occur throughout the day peaking in early morning and dipping late at night in healthy individuals.

Reverse T3 (Reverse Triiodothyronine)

As the name implies, Reverse T3 opposes the biological action of T3. It slows metabolism and renders T3 in the body biologically inactive. The rate of rT3 production relative to T3 will increase in times of stress (high cortisol) and in the presence of nutrient deficiencies, inflammation or certain medications.