Test Results

ZRT LABORATORY
8605 SW Creekside Place
Beaverton, OR 97008
Phone: 503-466-2445 Fax: 503-466-1636
info@zrtlab.com www.zrtlab.com

2014 10 27 006 B

Samples Arrived: 10/27/2014
Date Closed: 10/28/2014

Samples Collected: Blood Spot: 10/13/14 07:30

ZRT Laboratory Demo Account
8605 SW Creekside Pl
Beaverton, OR 97008

Essential Thyroid

BMI: 20.4
Height: 5 ft 3 in
Weight: 115 lb
Waist: 28 in

Menses Status: Hysterectomy (ovaries removed)
Gender: Female
Last Menses: Unspecified
DOB: 1/19/1951 (63 yrs)
Patient Ph#: Unspecified

Test Name	Result		Units	Range
Free T4 (Blood Spot)	0.6	L	ng/dL	0.7-2.5
Free T3 (Blood Spot)	2.4	L	pg/mL	2.5-6.5
TSH (Blood Spot)	7.3	H	µU/mL	0.5-3.0
TPO (Blood Spot)	120		IU/mL	0-150 (70-150 borderline)

Therapies
oral Vitamin D3 (OTC)

The above results and comments are for informational purposes only and are not to be construed as medical advice. Please consult your healthcare practitioner for diagnosis and treatment.

David T. Zava, Ph.D.
(Laboratory Director)

CLIA Lic # 38D0960950
Composed by: 1164619957 at 10/28/2014 9:45:03 AM

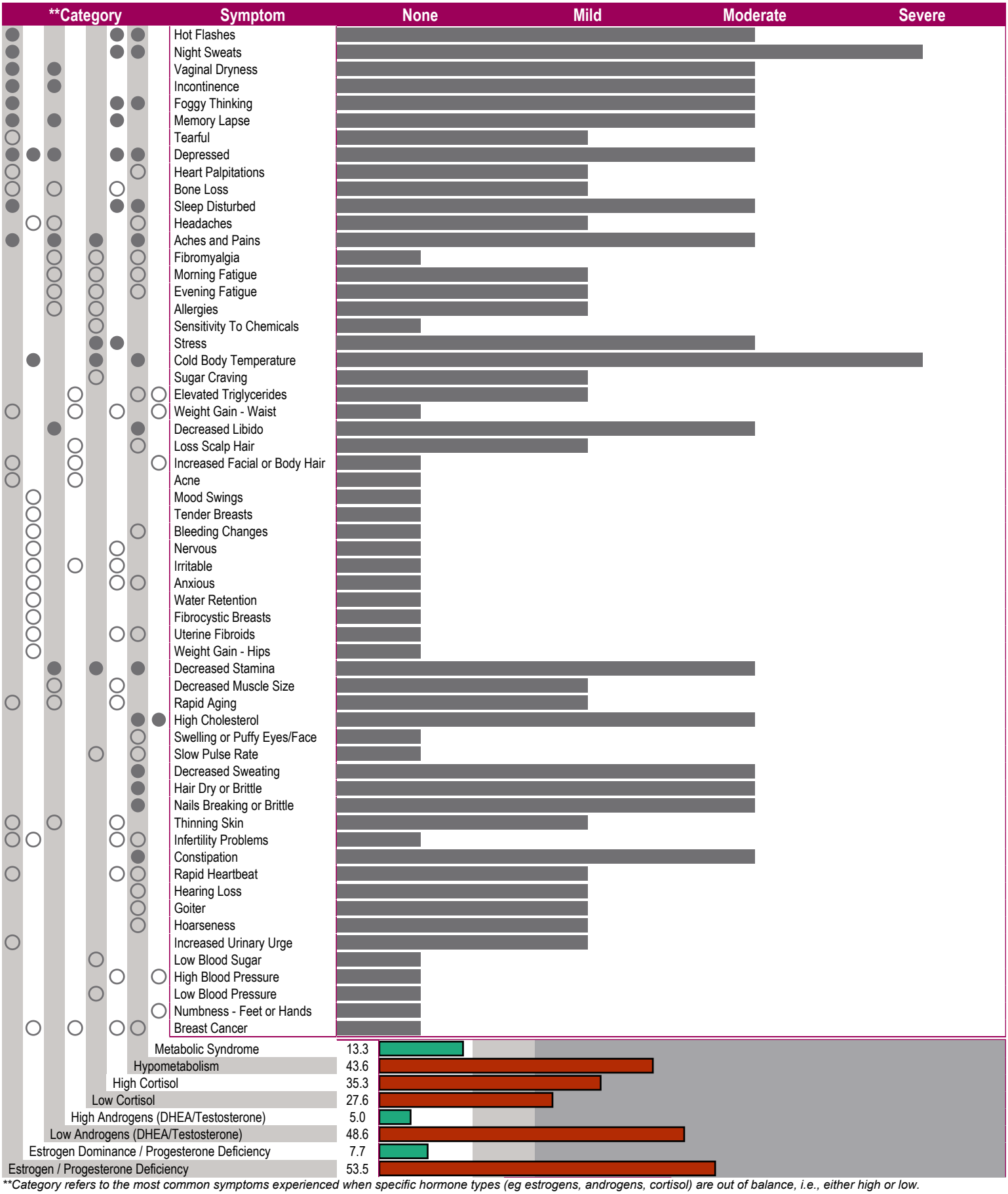
ZRT Laboratory Reference Ranges

Disclaimer: Supplement type and dosage are for informational purposes only and are not recommendations for treatment. For a complete listing of reference ranges, go to www.zrtlab.com/reference-ranges.

Test Name	Women
Free T4 (Blood Spot) - ng/dL	0.7-2.5
Free T3 (Blood Spot) - pg/mL	2.5-6.5
TSH (Blood Spot) - µU/mL	0.5-3.0
TPO (Blood Spot) - IU/mL	0-150 (70-150 borderline)

David T. Zava, Ph.D.
(Laboratory Director)

CLIA Lic # 38D0960950
Composed by: 1164619957 at 10/28/2014 9:45:03 AM



***Category refers to the most common symptoms experienced when specific hormone types (eg estrogens, androgens, cortisol) are out of balance, i.e., either high or low.*

The above results and comments are for informational purposes only and are not to be construed as medical advice. Please consult your healthcare practitioner for diagnosis and treatment.

David T. Zava, Ph.D.
(Laboratory Director)

CLIA Lic # 38D0960950
Composed by: 1164619957 at 10/28/2014 9:45:03 AM

Lab Comments

This individual should be considered as clinically hypothyroid with low free T4, low free T3 and high TSH. Signs/symptoms of hypothyroidism often include: fatigue, decreased stamina, depression, rheumatic pain, sleep disturbances, cold extremities or feeling cold, reduced body temperature, brittle nails, dry course hair, dry skin, hair loss, infertility, low libido, puffy eyes and face, decreased sweating, menorrhagia, and/or constipation. Many of these symptoms are self-reported as problematic. Thyroid treatment is strongly advised, as repercussions of prolonged hypothyroidism may be severe. Mortality, especially in elderly, is higher for those admitted to the hospital for non-thyroid diseases. This may be due to increased sensitivity to anesthesia, analgesics, narcotics, increased anemia, hypoventilation, lower sodium and/or impaired temperature control Treatment with combination T4 and T3 or T3 alone (slow release) is likely to be more successful that just T4 supplementation alone, particularly since high stress hormones such as cortisol increase T4 conversion to reverse T3, an inactive form of T3. Adrenal monitoring for cortisol by saliva testing is STRONGLY advised before commencing thyroid therapy. Thyroid therapy can increase preexisting problems of hypoadrenia (low cortisol) by increasing liver metabolism and clearance of cortisol.

Thyroid peroxidase (TPO) antibodies are borderline positive, suggesting a possible evolving issue with Hashimoto's autoimmune thyroiditis. If symptoms of thyroid dysfunction become more problematic it would be worthwhile to recheck TPO levels. Antibodies to this enzyme may cause an increase in autoimmune dysfunction around the thyroid causing an increase in inflammatory cytokines, increased T cells, and NK cell function. The autoimmune reaction to the thyroid tissue results in destruction of the thyroid cells with consequent release of high levels of thyroid hormones (T4 and to a lesser extent T3), which results in a hyperthyroid state. Continued destruction of the thyroid gland results in fibrosis and eventual depletion of the thyroid hormone, thus causing a hypothyroid state. Clinical studies show that selenium supplementation is helpful in decreasing TPO antibody levels and thus helps prevent autoimmune destruction of the thyroid gland (Duntas et al. Eur J Endocrinology 148: 389-393, 2003).

David T. Zava, Ph.D.
(Laboratory Director)

CLIA Lic # 38D0960950
Composed by: 1164619957 at 10/28/2014 9:45:03 AM