

# Test Results



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2014 01 23 \$\$\$%B



Samples Arrived: 01/23/2014  
Date Closed: 01/26/2014

Samples Collected:

Some Wellness Clinic  
8605 SW Creekside Pl  
Beaverton, OR 97008

Carrie Cardio  
1 Heart Way  
Beaverton, OR 97007

Menses Status: Hysterectomy (ovaries removed)  
Gender: Female

Last Menses: Unspecified  
DOB: 8/4/1956 (57 yrs) Patient Ph#: 555 555 5555

BMI: 30.0  
Height: 64 in  
Weight: 175 lb  
Waist: Unspecified

Test Name	Result		Units	Range
Insulin (blood spot)	19.1	H	mIU/mL	1-15 (optimal 2-6)
hsCRP (blood spot)	3.1	H	mg/L	< 3
Hemoglobin A1c	6.6	H	%	< 6%
Triglycerides (blood spot)	215	H	mg/dL	< 150 mg/dL
Cholesterol (blood spot)	260	H	mg/dL	<200 mg/dL
HDL	42		mg/dL	40 mg/dL or higher
LDL Cholesterol	175	H		<130 mg/dL (optimal <100)
VLDL	43	H		<30 mg/dL
Vitamin D, 25-OH, D2	<4		ng/mL	<4 if not supplementing (< 10 nmol/L)
Vitamin D, 25-OH, D3	17	L	ng/mL	32-100 ng/ml (80-250 nmol/L)
Vitamin D, 25-OH, Total	17	L	ng/ml	32-100

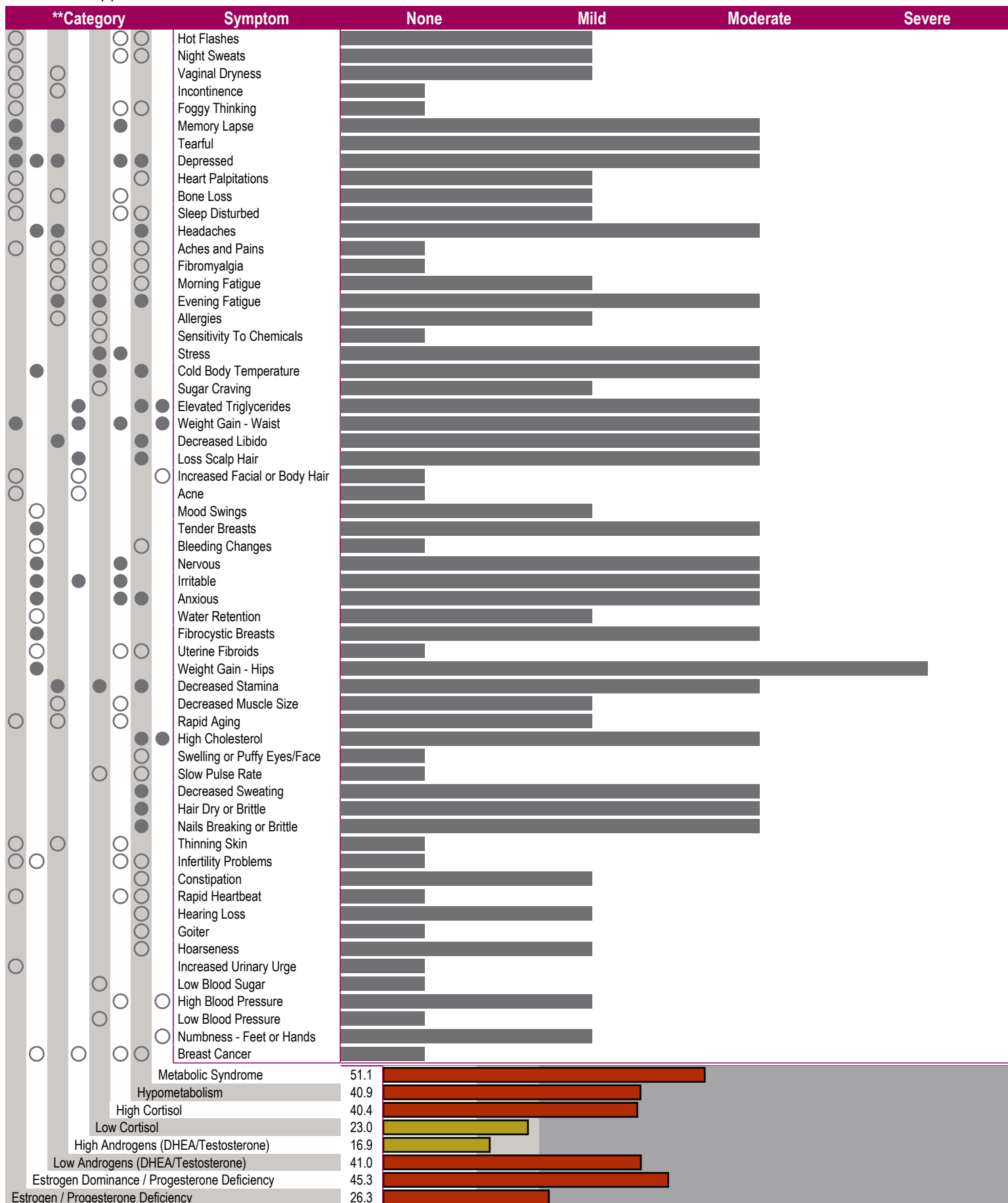
## Therapies

0.625mg oral Premarin (conjugate estrogens) (Pharmaceutical) (1 Days Last used); 400IU oral Vitamin D (unknown type) (OTC) (1 Days Last used)

**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](http://www.zrtlab.com/reference-ranges).

Test Name	Women
Insulin (blood spot) - mIU/mL	1-15 (optimal 2-6)
hsCRP (blood spot) - mg/L	< 3
Hemoglobin A1c - %	< 6%
Triglycerides (blood spot) - mg/dL	< 150 mg/dL
Cholesterol (blood spot) - mg/dL	<200 mg/dL
HDL - mg/dL	40 mg/dL or higher
LDL Cholesterol	<130 mg/dL (optimal <100)
VLDL	<30 mg/dL
Vitamin D, 25-OH, D2 - ng/mL	<4 if not supplementing (< 10 nmol/L)
Vitamin D, 25-OH, D3 - ng/mL	32-100 ng/ml (80-250 nmol/L)
Vitamin D, 25-OH, Total - ng/ml	32-100



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

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Composed by: 1163977097 at 3/12/2014 12:46:47 PM

**Lab Comments**

High fasting insulin indicates insulin resistance or a non-fasting sample (note: fasting insulin assumes no food or beverages, other than water, for at least 10 hours prior to blood collection). Insulin resistance predisposes to significantly increased lifetime risk for developing more serious health conditions such as metabolic syndrome (high blood pressure, excessive weight gain in the waist, elevated blood lipids), diabetes, and cardiovascular disease. Exercise, stress reduction, weight reduction, dietary modification, and creating a better hormonal balance with natural hormone replacement therapy have been shown to be effective natural ways of treating insulin resistance and should be discussed with your doctor. In women, extreme hormonal imbalances (includes estrogens, progesterone, testosterone, and cortisol), either too low or too high (usually caused by excessive supplementation), can result in insulin resistance. Testing for these steroid hormones in saliva and correcting any imbalances (ie, supplementation when too low and dose reduction or use of herbs, diet and exercise when too high), in combination with lifestyle changes (exercise, improved diet, stress reduction), should be considered as part of a treatment strategy to prevent long term adverse health risks.

High Sensitivity C-Reactive Protein (hs-CRP) is slightly elevated (3-5 mg/L). Slightly higher CRP is common and expected with use of oral estradiol supplementation. Elevated hs-CRP is a marker of inflammation and contributor to pro-inflammatory and pro-thrombotic elements of cardiovascular disease risk. Elevated hs-CRP is associated with increased risk of heart attacks, ischemic stroke and peripheral arterial disease. Individuals with elevated hs-CRP are often insulin resistant (associated with elevated triglycerides), which increases risk for development of diabetes. Lifestyle changes such as exercise, weight loss, and smoking cessation help lower hs-CRP.

HbA1c is elevated. HbA1c is a measure of red blood cell hemoglobin glycation. Because red blood cells have about a 120 day life span, a high HbA1c reflects mean hyperglycemia (elevated glucose) for the previous 3 months. In people without diabetes, a normal HbA1c value is somewhere between 3.5% and 5.5%. The American Diabetic Association recommends that HbA1c is normal if it is between 4% and 6%. People with diabetes have higher HbA1c values because their bodies have difficulty managing their blood sugar levels (hyperglycemia). A healthy goal for most people with diabetes is to keep HbA1c under 7% (or the goal set for you by your doctor). With persistently high levels of HbA1c, there is increased risk of developing problems such as eye disease, kidney disease, nerve damage, heart disease, and stroke. The recommendation is to measure HbA1c every 3-6 months, and treat to a target level of < 7%. If these recommendations are successfully followed in most people with diabetes, long-term complications, especially microvascular complications, can be significantly reduced.

Triglycerides are elevated. Triglycerides are a type of fat in the bloodstream that is taken up by tissues and used as a primary energy source. Triglycerides are derived from fats consumed in food and synthesized in the body from carbohydrates (sugars). Triglycerides are stored by tissues and released into the bloodstream in response to hormonal signals. Elevated triglycerides (hypertriglyceridemia) above 200 mg/dL are associated with increased risk for heart disease and stroke. Hypertriglyceridemia above 150 mg/dL signals insulin resistance/metabolic syndrome and is often found in untreated type 2 diabetes. Calorie restriction, lowering simple carbohydrates in the diet, and exercise are natural ways to lower triglycerides and reduce risk for cardiovascular disease and diabetes.

Cholesterol is within a range (>240 mg/dL) considered by most health experts as high risk for cardiovascular disease. Cholesterol should be evaluated in parallel with other lipid risk factors, which include triglycerides, LDL and HDL cholesterol. High levels of triglycerides and LDL cholesterol further increase risk, whereas high HDL cholesterol decreases risk. The current NCEP-ATP III recommendations for LDL cholesterol are <100 optimal, 100-129 near optimal, and 130 and above becomes the high range. The ADA and American College of Cardiology Foundation's consensus statement recommended a cutoff of 100 mg/dL for LDL in patients at high risk who have 2 or more additional risk factors for CVD. For additional information see <http://en.wikipedia.org/wiki/Cholesterol>

HDL cholesterol is within the ranges most health experts consider as low risk for cardiovascular disease. However, HDL-cholesterol should be evaluated in parallel with LDL and triglycerides, which also are risk factors.

Despite Vitamin D supplementation, the level of blood Vitamin D3 is lower than the range which many experts consider normal (32-100 ng/ml) or optimal for health (50-80 ng/ml). This suggests insufficient Vitamin D supplementation to bring the level to optimal range. Vitamin D deficiency has been closely associated with a wide range of conditions and diseases, which include cardiovascular disease, stroke, osteoporosis, osteomalacia, cancer, and autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, and diabetes (types 1 and 2) (for review see: Holick MF. NEJM 357: 266-281, 2007). Lack of adequate sunlight resulting from geographical location (northern climates), excessive clothing, working indoors during daylight hours, purposely avoiding sunlight with clothing and sunscreens, and aging of the skin contribute to low vitamin D levels. Vitamin D3 may be increased by eating foods high in D3 (fish), exposing the skin to sunshine without sunscreen during mid-day for 15-20min (latitudes below Boston, MA), use of a UVB light, and/or supplementation with Vitamin D3.