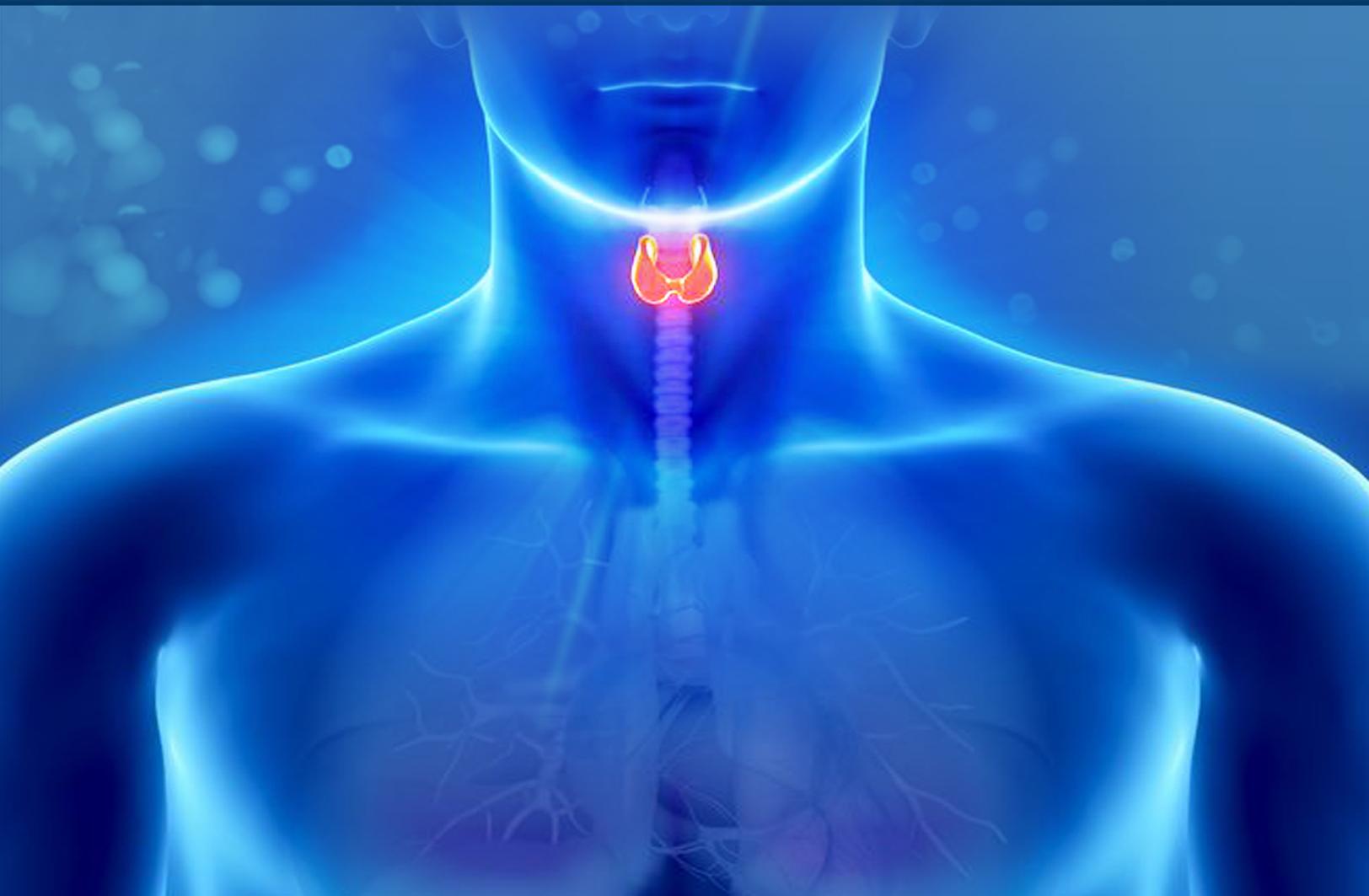


Doctor's Guide To End Your **THYROID** PROBLEMS

by **Dr. Tom Sladic DC, CNS**



Discover What Your Doctor is Missing!

BLOOD TESTING AND VALUES

I have listed some blood tests which include functional ranges (optimal ranges). The range you want for optimal function and Ideal health. Some of the ranges might be narrower than what is listed on your lab tests (reference range). It is a way to pick up shifts in health that might lead to diseases - allowing us to catch a problem before it manifests as a disease. I have listed many of the tests that I use. So to be clear, the ranges I include below are functional ranges for optimal health. The Labs have reference ranges which are broader to identify the disease.

If you are outside of the labs reference range you should consult with a Medical Doctor.

I will start with a complete list of Thyroid tests so that you can understand what they mean:

- i. **TSH (1.8-3.0)** – TSH is secreted by the pituitary gland. If the Thyroid is not making enough Thyroid hormone the pituitary will pump extra TSH (thyroid stimulating hormone) to attempt to increase production. This is one of the tests commonly looked at by the primary health care model and is primarily used to monitor for need and effectiveness of thyroid hormone replacement.

A high TSH is indicative of Hypothyroidism (low thyroid production).

A low TSH is indicative of Hyperthyroidism (Low meaning below 0.5) - this might be Graves's disease. You would also see T4 and T3 levels high. In this case an antibody test for Graves is needed: *TSI antibody*.

A TSH between 0.5 and 1.8 without being on medication is indicative of a problem with the pituitary. If a patient is on medication and is getting heart palpitations, then the patient might be overmedicated.

The TSH does not consider thyroid metabolism, autoimmune disease or thyroid pituitary feedback loops. Many patients have a normal TSH and feel horrible. It is not enough to get to the problem.

- ii. **T4, TOTAL (6—12mcg/dl)**- T4 is produced by the thyroid gland and total T4 is a measure of T4 that is bound by proteins and unbound by proteins. This number does not tell us how active T4 is. T3 uptake is used to indicate how much hormone is entering the cell.

Low- would lead us to consider hypothyroidism

High- would lead us to consider hyperthyroidism

- iii. **T3, Total 3** (100-190ng/dl) T3 is the most active thyroid hormone and is produced mainly from the conversion of T4 to T3 in the body. The Thyroid gland produces 93% T4 and 7% T3.

Low- would lead us to consider hypothyroidism

High- would lead us to consider hyperthyroidism

- iv. **Free T4** (1.0-1.5ng/dl)- Measures T4 that is not bound by protein and is more available for tissue receptors. Hereditary thyroid resistance can cause increased Free T4.

Low- would lead us to consider hypothyroidism

High- would lead us to consider hyperthyroidism

- v. **Free T3** (3.0-4.0pg/ml)- Measures T3 that is not bound by protein and is most available to the thyroid receptor sites.

Low- would lead us to consider hypothyroidism

High- would lead us to consider hyperthyroidism

- vi. **T3 Uptake** (28-35%)- Measure the amount of open receptor sites for T3. A low value means there are not many sites available. A high value means that there are plenty of open sites available. High levels of testosterone can decrease the number of sites and high levels of estrogen can increase the number of sites. An indirect way to determine if hormones are affecting thyroid function.

Low- would lead us to consider hypothyroidism

High- would lead us to consider hyperthyroidism

- vii. **Reverse T3** (90-350pg/ml) – Is produced in the liver. The liver will convert T4 to T3 or reverse T3. You should have a healthy balance. Some schools of thought suggest using a ratio of reverse T3 to Total T3 Divide Total T3/Reverse T3= 10 or greater to indicate healthy thyroid function.

- viii. **Thyroid Binding Globulin** (18-27ug/dl) (TBG) – measures the amount of protein available to transport thyroid hormone to the cells. Elevated testosterone or estrogen levels can influence the amount of TBG available producing hypothyroid symptoms.

- ix. **Thyroid Antibodies-** If you have any symptoms of thyroid dysfunction it is wise to screen for autoimmune disease or activity. I have consulted with patients that have completely normal thyroid lab values and tested positive for antibodies against the Thyroid. This test will tell you if your immune system is attacking the thyroid. Most commonly known as Hashimoto's disease. There are two tests to check- TPOab Thyroid Peroxidase and Thyroglobulin ab TGBab. (for hashimoto's) TSIab thyroid stimulating immunoglobulin ab is used to test for Graves disease (hyperthyroid).
Normal result: no antibodies produced.

Those are the tests needed to appropriately evaluate thyroid function. The goal would be to achieve normal functional values. Below I have supplied a list of other blood values that I use in evaluating patients. These tests give me a complete starting point in evaluating the Health Status of a patient.

TEST	Functional Range	Result:	Hi/Lo	Weakness-Possibilities
GLUCOSE	85 – 100 mg/dL		Normal High Low	The body's chief source of energy. It affects all organs, systems and tissues. High levels of blood sugar are inflammatory. This is a precursor to heart disease. <ul style="list-style-type: none"> ○ Hyperglycemic tendency toward diabetes, lack of exercise, low thiamine, questionable diet. ○ Hypoglycemia, hypothyroidism, excessive insulin output, protein malnutrition.
URIC ACID	Male: 3.7 – 6.0 mg/dL Female: 3.2 – 5.5 mg/dL		Normal High Low	End product of protein utilization. Meat, wine (esp. liver, kidneys), shellfish, and beans are high in uric acid. <ul style="list-style-type: none"> ○ Gout, arteriosclerosis., Rheum Arthritis, Kidney problems ○ Low B12, incomplete protein digestion, acidic pH, low in zinc and niacin. Copper deficiency.
BUN	13 – 18 mg/dL		Normal	Reveals the degree of toxicity of protein to the kidneys. To much urea

			High	<p>production by liver or not cleared by Kidneys.</p> <ul style="list-style-type: none"> ○ Renal problems, dehydration, hypochlorydria, (Lack of stomach acid), high protein diet, stress, liver, thyroid, parathyroid imbalance, kidney obstruction (e.g., stones), low vitamin A, C, and/or E, potassium, abnormal blood loss. ○ Pregnancy, Liver dysfunction, low protein or protein malnutrition, heavy smoking, tendency toward diabetes.
			Low	
CREATININE	0.7 – 1.1 mg/dL		Normal	<p>Relates to muscle activity and renal functioning. Kidneys clear creatinine.</p> <ul style="list-style-type: none"> ○ Dehydration, Kidney problems, prostate enlarge. indicates muscle breakdown to supply protein, high ingestion of meats, Supplementation of creatine can cause high levels. (It does not mean creatine is bad. Kidneys are just doing there job) check BUN also and liver AST and ALT ○ Pregnancy, bone growth, over stress to kidney (heavy coffee, tea, alcohol), too much vitamin C, compulsive exercise.
			High	
			Low	
SODIUM	135 – 140 mmol/L		Normal	<p>Essential to acid-base balance and intra/extra cellular fluid exchanges for normal body water distribution.</p> <ul style="list-style-type: none"> ○ Renal problems, water softeners, high sodium-salt diet, low water intake, relates to toxins, headaches, weak back muscles, low potassium levels, fluid imbalance and lack of physical activity. High adrenal function
			High	
Electrolyte formula	9-18optimal		Low	<ul style="list-style-type: none"> ○ Low adrenal function, low salt diet,

				lack of trace minerals, loss of fluids & loss of sodium in diarrhea or vomit. (Sodium) – (CL + CO2) = 9-18 optimal
POTASSIUM	4.0 – 4.5 mmol/L		Normal High Low	Essential to heart & kidney function and the maintenance of pH of both blood & urine. It maintains regular heart rate and muscle force, thus helps to prevents heart and general muscle fatigue. <ul style="list-style-type: none"> ○ Low adrenal, dehydration, low kidney function, overuse of potassium supplements, relates to Congestive heart failure and renal failure, low vitamin E, insufficient exercise and deep breathing. ○ Tissue destruction, Hi adrenal, renal problems, diabetes, tendency toward weak heart, alcohol related, folic Acid deficiency, low fluid intake, low potassium intake, low vegetable and fruit intake. diuretics
CHLORIDE (CL)	100 – 106 mmol/L		Normal High Low	Indicates kidney, bladder, and bowel function. Essential for electrolyte balance and pH maintenance. <ul style="list-style-type: none"> ○ Ht adrenal, excess salt, renal dysfunction, high salt intake, severe dehydration, could relate to bowel dysfunction, insufficient green vegetables, liver malfunction, magnesium deficiency ○ Low adrenal, low renal function, B12 deficiency, susceptible to infections, tendency toward colitis, bladder dysfunction.
CARBON DIOXIDE (CO2)	25 -30 mmol/L		Normal High	Bicarbonate is a vital component of controlling the PH of the body. Regulated by the kidneys. <ul style="list-style-type: none"> ○ Alkalosis most commonly seen with

			<p>uterus; helps regulate Acid-alkaline (base) balance in the body.</p> <p>Aids in absorption and metabolism of minerals such as calcium, phosphorus, sodium, and potassium; also utilization of vitamin B complex, C, and E.</p> <p>If the Magnesium is found intra-cellularly, therefore this is not the best method for assessing magnesium. *Run the red blood cell magnesium for more accurate assessment of magnesium*.</p> <p>Regulates body temperature.</p> <ul style="list-style-type: none"> ○ Kidney dysfunction., low thyroid, infection ○ Supplement use, malnutrition, alcoholism, and excessive use of diuretics. 	
TOTAL PROTEIN	6.9 – 7.4 G/dL		<p>Normal</p> <p>High</p> <p>Low</p>	<p>Screen for digestive problems, dehydration.</p> <ul style="list-style-type: none"> ○ Need HCl, amino acids and protein (indicates incomplete assimilation or non-use of protein) dehydration or loss of fluid. ○ Need HCl, amino acids, protein (incomplete protein digestion), poor nutrition, liver dysfunction.
ALBUMIN	4.0 – 5.0 G/dL		<p>Normal</p> <p>High</p> <p>Low</p>	<p>A major protein in the blood that transports hormones and drugs.</p> <p>Dehydration, protein gram overload or absorption, hypothyroidism.</p> <ul style="list-style-type: none"> ○ Starvation/malnutrition, edema, liver/kidney problems, vitamin C deficiency, hyperthyroidism, and ○ Heavy aspirin use, liver, bile, decreased. immune function
GLOBULIN	2.4 – 2.8 G/dL		Normal	<p>Essential to the antibody-antigen response; needed to fight infections; important in blood clotting.</p>

			<p>High</p> <p>Low</p>	<p>Valuable in assessing degenerative and infectious processes.</p> <ul style="list-style-type: none"> ○ Hypochlorhydria (Lack of stomach acid), allergy, a sign of arthritis. ○ Digestive dysfunction, Immune system deficiency, Liver disease, inflammation, infection related
A/G RATIO	1.5 – 2.0 Units		<p>Normal</p> <p>High</p> <p>Low</p>	<p>Relates to the body's defense mechanism; associated with the liver.</p> <ul style="list-style-type: none"> ○ Usually due to dehydration Not enough water before the test ○ Liver dysfunction, Immune system activation.
TOTAL BILIRUBIN	0.2 – 1.2 mg/dL		<p>Normal</p> <p>High</p> <p>Low</p>	<p><i>Bilirubin</i> is the end product of hemoglobin breakdown from red blood cells in the spleen and bone marrow. It is transported to the liver and then the gall bladder where it is eventually excreted. Two types direct and indirect. High levels of indirect are usually associated with increase cell destruction. High levels of direct are associated with liver or gall bladder problems.</p> <ul style="list-style-type: none"> ○ Fat mal-absorption & increased risk of cardiovascular disease, possible lymphatic problems, vitamin C deficiency; potential liver disease or jaundice. Spleen Dysfunction ○ Spleen insufficiency, iron deficiency, anemia, vitamin B-12, C, and copper deficiency.
ALK. PHOSPHATASE	70 – 90 U/L		<p>Normal</p> <p>High</p>	<p>Indicates how the liver is utilizing protein and fats, and pH balance. (An enzyme found essentially in bone & liver.)</p> <ul style="list-style-type: none"> ○ Bone growth, liver dysfunction, gastric inflammation, tendency towards arthritis, insufficient

			Low	calcium/phosphorus, could relate to certain medications, bile duct obstruction, or alcohol related. <ul style="list-style-type: none"> ○ Protein malnutrition, vitamin C, folic acid, and zinc deficiency, possible hypoglycemia.
LDH	140 – 180 U/L		Normal High Low	LDH is a catalyst for the conversion of pyruvic acid to lactic acid during cellular energy production. <ul style="list-style-type: none"> ○ Liver problems, cardiac stress, diabetic tendency, strenuous exercise, alcohol related, present in myocardial infarction & pulmonary conditions ○ Reactive hypoglycemia, possible edema and fatigue.
AST (SGOT)	10 – 26 U/L		Normal High Low	Relates to liver enzyme activity, kidney & skeletal muscle. <ul style="list-style-type: none"> ○ Liver complications, heart or muscle problems. ○ Low B6 levels and magnesium deficiency
ALT (SGPT)	10 – 26 U/L		Normal High Low	An enzyme associated with the liver, heart, and skeletal muscle. <ul style="list-style-type: none"> ○ Liver dysfunction, alcohol and drug related, vitamin A and C deficiency,² ○ Low B6 levels, alcohol,
GGTP	10 – 26 U/L		Normal High Low	An excellent indicator of liver damage or biliary obstruction of bile ducts outside the liver. <ul style="list-style-type: none"> ○ Alcoholism, bile obstruction, Viral hepatitis ○ Low B6 levels and copper, hypothyroid, low magnesium,
IRON SERUM	85 – 130 mcg/dL		Normal High	Critical to red blood cells ability to carry oxygen & remove carbon dioxide, helps to remove toxin residue from cells. <ul style="list-style-type: none"> ○ Hemochromatosis is a hereditary

			Low	<p>disorder (excess absorption of iron), liver problems. Increase iron intake(supplements), Iron cookware, drinking water</p> <ul style="list-style-type: none"> ○ Iron deficiency, internal or external bleeding.
FERRITIN	<p>M:33—236 F:10—122</p> <p>Post menopausal 33- 263</p>		<p>Normal</p> <p>High</p> <p>Low</p>	<p>The most sensitive test to detect iron deficiency. Main storage form of iron in the body.</p> <ul style="list-style-type: none"> ○ Hemochromatosis(excess absorption of iron), inflammation, Excess iron consumption ○ Iron- deficiency anemia,
TIBC	250-350 ul/dl		<p>Normal</p> <p>High</p> <p>Low</p>	<p>Total iron binding capacity. Measures the blood's capacity to bind iron</p> <ul style="list-style-type: none"> ○ Iron deficiency, ○ Hemochromatosis (excess absorption of iron)
HEMOGLOBIN A1C	<p>4.8--5.6</p> <p>5.7—6.4</p> <p>>6.4</p>		<p>Normal</p> <p>High</p> <p>Higher</p>	<p>Measures blood glucose that has attached itself to protein (albumin). This test more accurately measures glucose levels over the two-three weeks prior to the blood test.</p> <ul style="list-style-type: none"> ○ Increased risk for diabetes ○ Diabetes
CHOLESTEROL	150 – 200 mg/dL		<p>Normal</p> <p>High</p> <p>Low</p>	<p>Cholesterol is found in every cell of the body. Used to make hormones, enzymes, antibodies & all cells. It is manufactured in the liver. Cannot function without it.</p> <ul style="list-style-type: none"> ○ Hypothyroidism,early stage of diabetes, low thiamine, excessive dietary fats (hydrogenated oils), lack of vitamin A, C, D, E, stress, smoking, insufficient exercise. ○ Hyperthyroidism, protein malnutrition, alcoholism, carbs, cholesterol medication, It is not wise to have levels below 150.
*Triglycerides/	Divide ratio	2	High	Increased risk of heart disease - goal is 2.

HDL Ratio*				<p>For example Trig 100/Hdl 50= 2 Goal is ratio of 2, an excellent marker for heart disease.</p> <p>Are major building blocks of very low density lipoproteins (VLDL) and play an important role in metabolism as energy sources and transporters of dietary fat.</p> <ul style="list-style-type: none"> ○ Blood sugar problems, sugar & saturated fat eaters, stress related, increased risk of heart and small vessel diseases, poor exercise habits ○ Autoimmune disease, nerves & stress related, protein malnutrition, excessive use of bran & niacin, low unsaturated fatty acids,
TRIGLYCERIDES	75 – 100 mg/dL		<p>Normal</p> <p>High</p> <p>Low</p>	
HDL "GOOD" CHOLESTEROL	>55mg/dl--- <80 mg/dl		<p>Normal</p> <p>High</p> <p>Low</p>	<p>The "good" cholesterol, it carries cholesterol away from your arteries to your liver.</p> <ul style="list-style-type: none"> ○ Autoimmune cond, Inflammation, chronic liver disease ○ Associated with angina pectoris and myocardial infarction, diabetes mellitus, lack of exercise, obesity, smoking, hypertension, and incomplete diet.
LDL CHOLESTEROL	Less than 120mg/dl		<p>Normal</p> <p>High</p>	<p>The "bad" cholesterol, responsible for plaque build-up in the arteries.</p> <ul style="list-style-type: none"> ○ Blood sugar problems, sugar & saturated fat eaters, stress related, increase risk of heart and small vessel diseases, poor exercise habits.
CHOL/HDL RATIO	Less than 3.1		<p>Normal</p> <p>High</p>	<p>It is the ratios between these substances that identify your risk of having heart problems. The lower the ratio the safer you are.</p> <ul style="list-style-type: none"> ○ Increased risk of having heart

				problems. However, the *Triglyceride HDL ratio is best.*
TSH	1.8 – 3.0 uIU/ml		Normal High Low	TSH stimulates the thyroid gland to secrete additional T4. <ul style="list-style-type: none"> ○ Hypothyroid symptoms ○ Hyperthyroid symptoms (if less than 0.5)
FT3	3.0 – 4.0 pg/ml		Normal High Low	This test measures the free or active T3 hormone (unbound) levels, which is the actual hormones that culminates In an increase in metabolism and energy. <ul style="list-style-type: none"> ○ Hyperthyroid symptoms ○ Hypothyroid symptoms
FT4	1.0 – 1.5 ng/dl		Normal High Low	The measure of active T4 in the blood but, must be converted to T3 to impact metabolism. <ul style="list-style-type: none"> ○ Hyperthyroid symptoms ○ Hypothyroid symptoms
T4, TOTAL	6–12mcg/dl		Normal High Low	Reflects the total output of the thyroid gland and actual T4 hormone released. <ul style="list-style-type: none"> ○ Hyperthyroid symptoms ○ Hypothyroid symptoms
T3, TOTAL	60-180ng/dl 0.6-1.81ng/ml		Normal High Low	T3is the most active thyroid hormone which is largely protein–bound but not necessarily available for metabolic activity <ul style="list-style-type: none"> ○ Hyperthyroid symptoms ○ Hypothyroid symptoms
T3 UPTAKE	28 -38 mg/dL		Normal High Low	Indirect measurement of unsaturated binding sites on the thyroid binding proteins. <ul style="list-style-type: none"> ○ Hyperthyroid symptoms ○ Hypothyroid symptoms
REVERSE T3	25-30 ng/dl		Normal High Low	Your body, especially the liver, can constantly be converting T4 to RT3 as a way to get rid of any unneeded T4. <ul style="list-style-type: none"> ○ Hypothyroidism symptoms ○ Hypothyroid symptoms

TPO AB	Above lab range 0-34		Normal High	Check in cases of autoimmune thyroid disorders.
TGB AB	Above lab range 0-40		Normal	Check in cases of autoimmune thyroid disorders.
TH. BIND GLOB	18-27		Normal	This test measures the amount of proteins in the blood that transport thyroid hormones to the cells. Inherited thyroxine-binding globulin deficiency is a genetic condition that typically does not cause any health problems.
FTI Free thyroxine index	1.2-4.9 mg/dL		Normal High Low	The amount of unbound, physiologically active thyroxine (T₄) in serum. <ul style="list-style-type: none"> ○ Hyperthyroidism ○ Hypothyroid, low levels of selenium
WBC	5.0 – 8.0		Normal High Low	Fight infection, Immune system, found in bone marrow. Protects body against infection and inflammation. <ul style="list-style-type: none"> ○ Acute stressed/compromised. immune system, infection ○ Chronic stressed/compromised. immune system, infection
RBC	Female: 3.9 – 4.4 Male: 4.2 – 4.9		Normal High Low	Erythrocytes, relates to anemia. Red blood cells carry oxygen to the cells & carbon dioxide back to the lungs <ul style="list-style-type: none"> ○ Dehydration, Polycythemia (a blood disorder in which your bone marrow makes too many red blood cells), altitude sickness, emphysema. ○ Anemias, Iron deficiency, B12 needs, menses, Internal or ext bleeding.
HEMOGLOBIN	Female: 13.5 – 14.5 Male: 14 - 15		Normal High	Is the oxygen carrying molecule in red blood cells <ul style="list-style-type: none"> ○ Dehydration, Polycythemia (a blood disorder in which your bone marrow makes too many red blood cells), altitude sickness, emphysema.

			Low	<ul style="list-style-type: none"> ○ Menses or iron deficiency anemia, B6, B12 , Bleeding or loss of blood
HEMATOCRIT	Female: 37 – 44 Male: 40 - 48		Normal High Low	Percentage of red blood cells to whole blood (plasma). Relates to abnormal state of hydration, also the spleen denoting the amount of blood cell breakdown. <ul style="list-style-type: none"> ○ Dehydration, , Polycythemia (a blood disorder in which your bone marrow makes too many red blood cells), altitude sickness, emphysema ○ Low vitamin B12/Folic Acid, C, B-1, B-6, anemia. protein deficiency, improper diet, ulcerations, Menses or iron deficiency anemia's, Bleeding or loss of blood
MCV	85 – 92 cu microns		Normal High Low	Average volume of many cells. <ul style="list-style-type: none"> ○ Anemia -B12/ Folic acid deficiency ○ Iron deficiency, low B6, loss of blood
MCH	27 – 32 cu microns		Normal High Low	A hemoglobin-RBC ratio, gives the weight of hemoglobin in an average red cell. Relates to iron anemia. <ul style="list-style-type: none"> ○ Anemia -B12/ Folic acid deficiency ○ Anemia -Low B6, iron deficiency, Need vit. C, internal bleeding
MCHC	32 – 35%		Normal High Low	The volume of hemoglobin in an average red cell. Helps distinguish normal colored red cells from. <ul style="list-style-type: none"> ○ Anemia -B12/ Folic acid deficiency ○ Anemia -Low B6, iron deficiency, Need Vit. C, internal bleeding
RD	Less than 13		Normal High	Indicator of red blood cell size. <ul style="list-style-type: none"> ○ B12/Folate anemia and iron anemia
PLATELETS	50,000 – 450,000		Normal High	Cells in blood that form clots. <ul style="list-style-type: none"> ○ Polycythemia, free radical pathways, infection disorders

			Low	<ul style="list-style-type: none"> ○ Leukemia, immune dysfunction
NEUTROPHILS	40 – 60%		Normal High Low	This is a type of white blood cell. Amount of infection fighting capacity. The "good guys". <ul style="list-style-type: none"> ○ Immune compromise, infections and poisonings, possible bacterial infection, excessive amount of foreign protein due to undigested protein and muscle breakdown. ○ Low immune, free radical pathways, defi. vitamin A, B-6, B-12, folic acid, iron, and copper; toxin
LYMPHOCYTES	25 – 40%		Normal High Low	This is a type of white blood cell. Aids in the destruction and handling of body toxins & by-products of protein metabolism. Relates to the healing process. <ul style="list-style-type: none"> ○ Stressed immune system, possible viral infection, hepatitis, fever, infection. ○ Low immune, free radical pathways
MONOCYTES	Less than 7%		Normal High	This is a type of white blood cell. Formed in the spleen and bone marrow they can ingest and digest large bacteria. Relates to normal tissue breakdown by the liver. <ul style="list-style-type: none"> ○ Inflammation, infection, parasites, BPH, possible viral infection, possible arthritis, stress and insufficient liquids.
EOSINOPHILS	Less than 3%		Normal High	This is a type of white blood cell. Responsible for the protection and preservation of life via the immunologic response. Relates to infections, inflammations, diseases and allergies. <ul style="list-style-type: none"> ○ Parasites, allergy, food allergies, intestinal infection, skin disease.
If Monocytes are above 7 and Eosinophils are above 3. Check				

for parasites.				
BASOPHILS	0 – 1%		Normal High	This is a type of white blood cell. Involved in deep membrane allergies. Relates to the immune response, inflammation, and Gastrointestinal tract. <ul style="list-style-type: none"> ○ Parasites, inflammation, possible allergies, hyperthyroidism, stress, blood complications E and C, blood clotting.
CRP (cardio) C-reactive protein	<2.0			Patients with levels of CRP are at an increased risk of diabetes hypertension and cardiovascular disease. This is a marker for inflammation. Patients with active autoimmune disease can have high numbers. ** be sure to get this below 2. Use supplements that decrease inflammation. <ul style="list-style-type: none"> ○ Lower relative cardiovascular risk
	2.0—3.0			○ Average relative cardiovascular risk
	3.1—10.0			○ Higher relative cardiovascular risk *High Inflammation
Erythrocyte sedimentation rate.	0-15 males 0-20 females		High	Marker of non-specific tissue inflammation or destruction. <ul style="list-style-type: none"> ○ Indication of a disease process going on.
VAP cholesterol analysis	Goal is to have large particle size			This is the best way to determine the particle distribution of cholesterol. If you are worried about your cholesterol levels this is the test to have.
Insulin Fasting	Goal is less than 10 IU/ml			Provides a view as to how the body manages blood sugar. High levels of insulin are inflammatory contributing to heart disease.

				or stroke risk.
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****This chart is a guide for nutritional support information and to reinforce systemic and metabolic health and is not intended as a diagnosis or treatment for any symptoms, conditions or disease.**