

## How To Interpret Lab Tests

Dietrich Klinghardt, modified from the work from: Gay Langham-Mc NallyCCN

**HCL deficiency** sodium 145, chloride 105

if lower: give HCL (Betaine HCL) before meals

**alk phos** low normal or below

give proteolytic anti-inflammatory enzymes, zinc and magnesium

**Ph**

CO<sub>2</sub>: 25-27

the lower the more acid you are. The higher the more alkaline.

**Adrenals:**

sodium 145 potassium 4.6

If potassium 1/3 off either direction, problem. If sodium off 3 points either direction, also

sodium divided by potassium should be 35. If below 32: hypofunction., If above 38

hyperfunction

**Sleep apnea:**

rbc 4.6 hemoglobin 14.6 hematocrit 42

If Hgb, rbc or Hct up: the more up, the more likely to have sleep apnea

Treat with Carbo Veg 30 C 2 pellets every night

**Osteoporosis:**

Alk phos: 65-85 (zinc and mag dependent)

Calc 9.8-10.2

Phos: should be 1/3rd of calcium

**Blood aggregation:**

Platelets 250 000. Hct: 42

The higher the more **toxic metals**

**Inflammation /autoimmunity**

Cholesterol 165-185

Triglycerides 50 % cholesterol. If lower = autoimmune

Basophils: 0 -if higher: inflammation

Ferritin: 30-50 if over: inflammation/free radical pathology. If high give copper and

selenium

Low cholesterol implications

Myelin sheaths

brain tissue

immune complexes

hormone production

pesticide protection

### Viral infections

Lymphocytes: neutrophils below 55 (55-60) -the lower the more viral  
Lymphos above 28 (25-28)  
albumin 4.5, if below= viral  
total protein 7.3, if higher chronic infection (every point above 7.2 –the more chronic)  
Globulin should not be over 2.8  
Classic viral infection: virus 4 feet away from people in air, alive for 4 days  
Neutrophils low  
lympho high  
Tot. protein low  
albumin low  
glob (2.8) low if below =trouble  
Gluc 6 phosphate dehydrogenase 10-11, if below 10; don't give iv Vit C

### Lyme indicators

Initially: iron, ferritin, cholesterol immunity up: neutros climb upwards and lymphos begin to drop  
Classic pattern: declining cholesterol and iron  
increasing ferritin (decreasing if micro bleeding)  
Neutros continue to climb  
Lymphos continue to drop

### Thyroid dysfunction

T3 uptake 32 (lower is low T3)  
T4 8.5-9.0  
TSH: 0.4-0.9 (British values)  
If TSH below 0.4 and no adverse symptoms and on T3 = ok for a while

### Amino acid deficiency

BUN 16-18 goes down . if goes down in cancer below 9–death soon  
Albumin 4.5: if low, heart “melts” -edema death  
Transporter of bili, fatty acids, hormones, protect fatty acids from oxidative damage, binds drugs and residues  
Build alb and glob with hemp seed , eggs, shellfish, (avo for glutathione)  
Glob 2.8

### Plasma amino acids

Aminos: taurine, glycine, gaba high: too much stress -try to calm excitation  
Taurine mainaints magnesium and potassium  
Detox aminos: methionine, glycine, cystine, cysteine, taurine  
Anti viral aminos: lysine  
Neurotransmitter aminos: trypt, phenylalanine, glut, GABA, glycine, tyrosine, asparagine, aspartic acid, glutamic acid

### **Pesticides/heavy metals**

HDL normal 60-90

over 90: pesticide exposure and toxic metals

LDL goes up with toxin-release related inflammation (acute state –requires protective action, i.e. chelation, complexing or clathrating agents)

### **Toxic metals**

platelets above 250 000

HDL goes up immediately, platelets slower (chronic state)

### **Alcohol, drugs, sugar intake**

GGT 10-15= normal. If higher, above is true

### **Allergies**

eosinophils 0-2. If higher: allergic state

### **B6/ Vit C**

MCV 90-92 (lower than 90 =B6/C deficiency)

MCH 28-29 (higher then 29 =B6/Vit C deficiency)

### **B12/folate**

MCV above 92

MCH 28-29 (the higher the worse def.)

RDW 12-12.9 (reticulocyte diameter width) -the higher the more deficient

MCHC 32-33

Lyme patients 50 mg B12 per day i.m

Paralysis: 100 mg/day (!)

Vit K injections work well for pain

### **Viral anemia**

All low:

Iron 100-110, rbc: 4.6, Hemoglobin14.6, Hkt 42.0

### **Bakterial anemia**

Elevated ferritin and lowered iron

Ferritin 30-50 (bacteria use iron as transporter –sequestered iron in ferritin)

Other markers low

### **Iron anemia**

TIBC should be 3 times what iron in serum is

Normals: rbc: 4.6. iron 100-110, Hkt:42, Ferritin 30-50

Hgb 14.6

### **Acute infection:**

Normal: Wbc not over 6.9. If higher: acute infection

5.5 –6.8 = chronic infections (sinuses, gums, STDs, teeth, URIs)

## **Mineral deficiency (fix in order to fix hormones)**

Alk phos: 65-85

Calcium 9.8-10.2

Phos 33% of calcium

### **Hair**

Look at sulfur first. If low, false neg readings on toxic metals

Normal 50-52 000. If higher: gut inflammation.

If iron high: = toxic metals much higher than shown

If essential minerals low: give minerals. If high, you do not know what it means. Get packed red blood cell test.

### **Toxic metals**

Antimony, arsenic, nickel, tin, cadmium =pesticides

Germanium creates oxidation = important and good in Lyme 20 mg/day. Too much: neurological disorders

Bismuth: toxic material. Good for H pylori (get from Thorne: Bismuth citrate  
May need blood bismuth level

In whole blood cal and mag should be high (cal higher than mag, if revrsed:  
phos low = ATP def and vit D def.) Test only gives numbers for this moment!

Transient value

Cadmium allowed in white non organic rice