

# Lab Values for Insulin Resistance or Dysregulation Screening

|                                       |   |   |
|---------------------------------------|---|---|
| <b>Triglycerides</b>                  | Under 100 is the goal optimal<br>Levels greater than 60% of total cholesterol should be addressed, especially if HDL are 40 or below. Further testing and monitoring is in order. |   |
| <b><u>Fasting Insulin</u></b>         | 10 IU /ml or below  | optimal                                     |
|                                       | Over 10 IU/ml   | high  |
| <b>HBGA1C or Glycated Hemoglobin</b>  | 5.4 or less percent   | optimal                                     |
|                                       | >5.7  | prediabetes - insulin resistance developing |
|                                       | 6.5 or higher   | new guidelines for diabetes                 |
| <b>Glucose, Fasting</b>               | 70-85 mg/dl   | optimal                                     |
|                                       | 85-100 mg/dl  | high  |
|                                       | 100-126 mg/dl   | diabetes, prediabetes                       |
|                                       | 126 plus  | indicative of diabetes                      |
| <b>Insulin Resistance Calculation</b> | (fasting insulin x fasting glucose) Divide that number by 405. If that calculation is greater than 1.8 you have insulin resistance.   |   |
| <b>Leptin</b> (use RIA testing)       | 4-6 ng/dl   | optimal                                     |
|                                       | Up to 9 ng /dl  | acceptable                                  |
|                                       | 10 plus ng/dl   | high  |

Any of the above values that are above OPTIMAL should be addressed. Patients using glucometers should continue taking their regular glucose levels when taking nutrients to enhance blood sugar regulation often taking nutrients will allow the body to more efficiently and medications can initiate hypoglycemia.

Several authors have indicated that toxins and environmental factors have impaired glucose control. Consider a cleanse program like the NutriClear Plus and then the Metabolic Biome Plus as a prelude to any therapy. This two-step process helps the patient take small steps to get adjusted to an anti-inflammatory diet. I can't tell you how many resistive patients have benefited from starting with these simple, easy to understand dietary and allergy reducing steps. Patients feel better faster as they reduce systemic inflammation. Expect to see cholesterol, triglycerides, and blood sugar levels drop significantly. Some cases of insulin resistance take a little longer, so insulin numbers may not come down as fast. Contact your local Biotics representative for the dietary suggestions and exact protocols.

## **Step One**

### **NutriClear Cleanse Plus - Detox - Dietary Changes (last 15 days)**

One supplement pouch mixed with water or low-calorie milk substitute like coconut milk for 2 meals.

One supplement packet with the supplement pouch above.

Follow anti-inflammatory diet carefully in that accompanies the instruction booklet.

**Option** - Receptor Detox 2 bid, Chlorella 3 bid, TolerAid 1 bid

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## **Step Two - Dietary Changes Continue Feeding The Microbiome**

### **Metabolic Biome Plus (2-4 weeks)**

One pouch packet twice a day as a shake. Use for 2 meal replacements if weight is an issue. Use supplement packet with each shake.

### **Step Three**

Retest laboratory indicators and modify as needed.

**Multiple formulas to choose from: GlucoBalance, GlucoResolve, BioGlycozyme.** Use 2 capsules 3 times per day.

In the following dosage recommendations use the higher doses if the patient is overweight or if lab numbers are significantly outside the optimal ranges discussed above.

**Essential Fatty Acids: Optimal EFAs Caps or EFA SirtSupreme** - Use 2 capsules three times per day, a mixture of omega-3s and organic GLA with some flax seed oil to reduce inflammation via NF-kappa B pathways.

**Berberine HCL** – 1-2 capsules three capsules per day.

**Bio-DK-Mulsion** - 5 drops yield 5,000 I.U. or 125 mcg. of emulsified vitamin D3 and 50 mcg of Vitamin K2 as MK7 and 500 mcg of K1. Some studies show vitamin D works as good as or better than some medication to reduce blood sugar.

**Niacinamide** - 500 mg three times per day, to help burn sugars more efficiently.

**Magnesium** 400-800 mg - Acti-Mag Plus is a berry flavored powder. Each scoop is 400 mg and does not cause a loose stool. Mg-Zyme contains 100 mg of elemental magnesium per tablet. Start with 3 tablets at bedtime and increase to bowel tolerance. The goal is loose but formed stool. Magnesium will draw water to the bowel and have a laxative effect if too much is used.

**Anion gap** is calculated by adding sodium and potassium and subtracting the total of Co2 and chloride. Based on over 10,000 patients; The Balancing Body Chemistry group found if that number is 14 or higher a thiamine deficiency is probable. Use Thiamin 50 one tablet tid. Thiamine has been called the poor man's insulin in past years.

## **ADDITIONAL NOTES TO CONSIDER:**

**REDUCE CARBOHYDRATES TO NO MORE THAN 60-80 GRAMS PER DAY** until blood sugar is stabilized and then monitor and balance carbohydrate levels and blood sugar. It may be necessary to go lower than 60 in some cases. Use 60 grams if weight loss is an issue.

**CONSIDER TESTING FOR FOOD SENSITIVITIES.** Numerous authors have shown blood sugar dysregulation occurs more frequently when food sensitivities are not addressed. For unresponsive cases this can often seem miraculous. Consider using KBMO to test for IgG and C compliment 617-990-5741. Testing is very reasonable and can be done using blood spot technology and therefore does not require venipuncture.

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**INCREASE MOVEMENT AS PART OF A DAILY EXPERIENCE:** The best way to reduce sugar is to burn it through movement. See Tuesday Minute on exercise #197 and #299 called “High Intensity Interval Training”. Exercise is not an option once the battle begins.

**INTERMITTENT FASTING OR TIME RESTRICTED EATING** has been extremely effective as part of an insulin reduction strategy. Limit eating to 8 hours a day and make sure food is consumed three hours before sleep. This step is essential for resistive cases until insulin resistance is resolved.

**ALWAYS CONSIDER THE GUT** if the patient is Not responding as fast you expect. In my forty years of experience with patients when patients are not responding I have found when I go back and address digestion and dysbiosis and stabilize the gut, results expected will follow. For background and rationale; See (link attached) Dr. Vasquez work, Reducing Pain and Inflammation Naturally. Part 6: Nutritional and Botanical Treatments Against “Silent Infections” and Gastrointestinal Dysbiosis, Commonly Overlooked Causes of Neuromusculoskeletal Inflammation and Chronic Health Problems

**EAT VEGETABLES FIRST** to provide fiber which will slow the release of any dietary sugars ingested.

**AVOID ALL HIGH FRUCTOSE CORN SYRUP** as it is liver toxic and impairs detoxification systems that are already overloaded.

**AVOID ALL GENETICALLY MODIFIED FOODS** Avoid plant-based protein meats.