

# Insulin Resistance/Dysregulation Lab Values

|                                       |  |                                   |
|---------------------------------------|--|-----------------------------------|
| <b>Triglycerides</b>                  | 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>Fasting Insulin</b>                | 10 IU /ml or below   | optimal                           |
|                                       | Over 10 IU/ml  | high                              |
| <b>HBGA1C or Glycated Hemoglobin</b>  | 5.4 or less percent  | optimal                           |
|                                       | 5.6 - 5.8  | acceptable                        |
|                                       | 5.9 - 6.9  | high                              |
|                                       | 7.0 or higher  | at risk of diabetic complications |
| <b>Glucose</b>                        | 70 - 85 mg/dl  | optimal                           |
|                                       | 85 - 110 mg /dl  | high                              |
|                                       | 110 - 126  | very high                         |
|                                       | 126 plus   | indicative of diabetes            |
| <b>Anion Gap</b>                      | (Sodium +Potassium) – (CO2 +Cloride) = Anion Gap; if that number is 14 or over and the CO2 is low (under 24) consider a thiamine deficiency, and supplement with a phosphoralated form like <b>Bio-3B-G</b> . Low B1 is often the cause of elevated glucose. |                                   |
| <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>                         | 4 - 6 ng/dl  | optimal                           |
|                                       | Up to 9 ng /dl   | acceptable                        |
|                                       | 10 plus ng/dl  | high                              |

Any of the above values above OPTIMAL or ACCEPTABLE should be addressed. Patients using glucometers should continue taking their regular glucose levels when taking nutrients to enhance blood sugar regulation

**GlucoBalance®** Use 2-3 capsules three times per day, a formula developed by Dr.'s Jonathon Wright and Allan Gaby as a source of foundational nutrients. Use the 3 capsules for heavier patients or lab numbers in the high range discussed above. Reduce to 2 three times per in 30 days

**Optimal EFAs®** Use 2 capsules three times per day, a mixture of omega 3's and organic GLA with some flax seed oil to reduce inflammation via N-F-kappa B pathways

**Bio-D-Mulsion Forte®** 2 drops yields 4,000 IU, some studies show vitamin D works as good or better than some medication to reduce blood sugar

**Lipoic Acid** 100 mg three times per day, to prevent neuropathy and provide antioxidants to protect tissue

**Niacinamide (Bio-B3 Plus 250™)** To help burn sugars more efficiently 1-2 tablets three times a day.

**Bio-3B-G®** Each low dose tablet is 1.5 mg take 2 every waking hour for 10 days and monitor blood sugar, then 3 three times a day for 60 days.

**Mg-Zyme™** (magnesium) Start with 3 tablets at bedtime and increase to bowel tolerance. The goal is a loose but formed stool. Magnesium will draw water to the bowel and have a laxative effect if too much is used

**REDUCE CARBOHYDRATES TO NO MORE THAN 60 GRAMS PER DAY**

Monitor blood levels on a regular basis and adjust nutrient dosage levels accordingly. The closer patients follow dietary and lifestyle modifications the lower dose nutrients will be needed.