TESTING for Insulin Resistance

Testing is necessary to fully evaluate blood sugar and insulin dysregulation. The following are tests are recommended to most accurately evaluate possible blood sugar and insulin mishandling:

1. Blood chemistry

a. Lipid panel (cholesterol, HDL, LDL, triglycerides)

The closer the cholesterol/triglyceride ratio is to a 1:1 ratio, the more likely a blood sugar issue exists; ideally it will be a 2:1 ratio. Additionally, high LDL and low HDL may also indicate a trend towards insulin resistance.

b. Glucose

Glucose is not an accurate marker by itself, but in conjunction with other markers can be valuable. When fasting glucose is above 100mg/dL, this can indicate a tendency towards insulin resistance. Along with an elevated Hemoglobin A1C and cholesterol/triglyceride ratio close to 1:1, elevated fasting glucose further indicates the likelihood of insulin resistance.

Glucose below 85mg/dL, along with an LDH below 140 IU/L, may indicate a tendency towards reactive hypoglycemia.

c. Hemoglobin A1C

Above 5.6% can indicate a general trend towards insulin resistance. The higher the value, the more likely there is blood sugar and insulin dysregulation.

d. Insulin

This is not a valuable marker due to its short half-life. However, in conjunction with other markers, including Cpeptide, insulin levels can offer additional information. Elevated insulin often points to early signs of insulin resistance and possibly a causative factor of reactive hypoglycemia. If insulin is low this may be an indication of poor pancreatic production and late stage insulin resistance.

e. C-peptide

C-Peptide is produced by the pancreas in a similar quantity as insulin but has a longer half-life than insulin and is therefore a more stable and reliable marker. If

C-Peptide is elevated, there is an increased chance of early insulin resistance and reactive hypoglycemia. If C-Peptide is low, along with elevated glucose and/or Hemoglobin A1C, there is an increased chance of late stage insulin resistance.