Insulin Resistance

Fasting Insulin Testing In Blood Spot

The Problem
Insulin resistance occurs when there is a lack of cellular response to the presence of insulin and a failure of the tissues to take up glucose for energy production. This results in chronically high insulin levels as the body attempts to normalize blood sugar levels. Linked with lifestyle excesses of stress and carbohydrate consumption in the absence of exercise, insulin resistance is associated with obesity, and increased risks for type 2 diabetes mellitus and cardiovascular disease.

The Epidemic
Over half of the US population is overweight or obese according to the latest national health statistics. A recent study finds that approximately half of these individuals have clinically significant insulin resistance, (ref: 1) At the same time, diabetes rates are shooting up and researchers at the Centers for Disease Control (JAMA 2002) estimate that as many as 47 million Americans may exhibit "a metabolic syndrome" characterized by the presence of: Insulin resistance, Obesity, High levels of blood sugar, blood fats and blood pressure. *"Given the current epidemic of obesity and the fact that lifestyle interventions can decrease insulin resistance having a relatively simple way to identify overweight or obese persons who are insulin resistant* would be clinically beneficial."*- Dr. Tracey Mclaughlin in Ann Intern Med 2003.

Look No Further!
*Fasting insulin in blood spot is the relatively simple way to identify insulin resistance in overweight, obese (or other) individuals. A fast of 12-hours is required. A minimally-invasive finger prick and a few drops of blood is all that is needed to quantify fasting insulin levels. The test offers particular insight for patients with symptoms, despite a normal blood glucose test, or in conditions that require regular monitoring.

For Fasting Insulin
Individuals with known/suspected hypoglycemia, insulin resistance, diabetes, pre-diabetes, family history of diabetes, overweight or obesity Women with irregular menses, scalp hair loss, increased facial/body hair, polycystic ovary syndrome, and individuals with symptoms of: anxiety, palpitations, diaphoresis, fatigue, irritability, weakness/shakiness/ dizziness, food/sugar cravings, central obesity, and rising blood sugar levels.

Advantages
Home kit facilitates collection of fasting insulin levels. Finger sticks more acceptable for children and ideal in remote or rural locations. Collection ease allows routine monitoring. *In the identification of insulin resistance, use of the fasting plasma triglyceride concentration, the plasma triglyceride-HDL cholesterol ratio, or fasting plasma insulin concentration offer a reasonable degree of clinical utility. Of these, plasma insulin concentration is the metabolic marker most closely related to insulin resistance.* (Annals of Medicine; November, 2003)

Benefit
Early detection of insulin resistance is the key to prevention of harmful changes in the body caused by high levels of insulin and blood sugar. Blood spot screening of fasting insulin levels can help providers and their patients monitor and target necessary lifestyle interventions to reverse disease risk factors. It has been established that fasting insulin, particularly in populations with normal glucose tolerance, is a very good predictor of insulin sensitivity.

How Can I Find Out If I Have A Major Hormone Imbalance?

For Adrenal Imbalance symptoms test:
Adrenal Function Test DHEA-s and diurnal (all day) cortisols: morning, noon, evening and night. Cortisol can also be measured twice a day (morning and bedtime).

For Insulin Resistance symptoms test:
Fasting Insulin identifies risk factors for diabetes, stroke, heart disease and cancer.

In Saliva
Best comprehensive assessment of diurnal adrenal function.

In Blood Spot
Insulin resistance signals impairment in the ability of body cells to take up insulin for energy conversion in the body.