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A Center for Metabolic, Liver & Obesity Medicine

Metabolic (Insulin Resistance) Syndrome

Metabolic Syndrome is the epidemic of our lifetime. Recent studies suggest that 88-93% of our population has at least one marker of poor metabolic health, including two thirds of normal weight people.

When we only focus on Obesity as a disease, we leave behind a large number of people who look thin, but are metabolically unhealthy, placing them at higher risk for multiple diseases and early mortality.

The Metabolic Syndrome is classically defined as having three of the following:

- Central Obesity (waist > 35 “in women and > 40 “in men.)
- Blood pressure > 130/80 (or on medication for high blood pressure)
- Blood sugar > 100 (or on medication for Type 2 Diabetes)
- Triglycerides > 150
- HDL < 50 in women and < 40 in men

Scientists noticed that patients with these findings were all developing the same diseases. They put together the link and that Insulin Resistance was at the core, originally calling this “Syndrome X.”

Rather than looking at these as separate diseases, at Trajectory Health Partners we search for the multiple issues that may be driving the insulin resistance.

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Other clues that you may have insulin resistance:

- Elevated Triglyceride to HDL ratio of > 2.5
- HOMA-IR score > 2 (calculated from fasting glucose and insulin levels)
- Fasting insulin level > 10
- Waist to Height ratio > 2

At its simplest, Insulin Resistance is a reduced response in the cell to the hormone insulin, made in the pancreas and secreted primarily with eating. Insulin affects all the cells of the body, essentially telling cells and organs what to do with energy. When cells and organs are insulin resistant, they can no longer function properly, starting a cascade of disease.

The pancreas tries to overcome this resistance by secreting higher and higher levels of insulin, defining the other piece of the puzzle: Hyperinsulinemia. This is an often-ignored part of the picture. High insulin levels are associated with poorer health outcomes, cardiovascular disease, cancers and early death, and plays a role in driving fatty liver.

By the time Type 2 Diabetes is diagnosed, a patient may have been insulin resistant with elevated insulin levels for 15-20 years! Our current medical system is missing this, and the opportunity to reverse it before disease starts!

Why you should care about Insulin Resistance and Metabolic Syndrome

If you have components of the Metabolic (Insulin Resistance) Syndrome you are at risk for:

- Cardiovascular disease, including heart attacks and strokes
- Steatotic (fatty) liver disease, risking cirrhosis/end stage liver disease/liver cancer
- Type 2 Diabetes: let's not forget about blindness, amputations and kidney dialysis
- Multiple cancers
- Dementia
- Infertility including Polycystic Ovary Syndrome and erectile dysfunction
- Obesity
- Migraines
- Arthritis
- Chronic kidney disease

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What are the most common drivers of Insulin Resistance (IR)?

- Chronically elevated insulin levels contribute to IR. This is classically brought about by a diet high in starches and sugars, and frequent snacking, all of which raise insulin more than other eating patterns,
- The fructose component of sugar contributes to IR through its toxic effects on the cells of the liver, where it acts as a mitochondrial toxin.
- Chronic inflammation contributes to IR. This is commonly seen in fat tissue as the fat cells outgrow their blood supply and become inflamed.
- Physical inactivity contributes to IR.
- Poor sleep contributes to IR.
- Chronic stress through the hormone cortisol contributes to IR.
- Obesogens in our environment contribute to IR. (Obesogens are chemicals that can disrupt the body's normal functions and lead to obesity.)
- Age and genetics also play a role but are out of our control.

Metabolic Syndrome and Insulin Resistance are states of carbohydrate intolerance. Patients cannot metabolize carbohydrates in a healthy way, instead diverting these carbohydrates to the liver where they are converted to fat.

At Trajectory Health Partners we perform a thorough metabolic assessment and identify where along the metabolic/insulin resistance spectrum each patient resides.

We then implement a comprehensive treatment program based upon our Cornerstones of Care: Medical, Nutritional, Physical and Behavioral. We individualize this to each patients' metabolic needs, to change the trajectory of their lives.

If detected early, Insulin Resistance/Metabolic Syndrome can be reversed before diseases start!

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