



# Insulin Resistance

## WHAT IS INSULIN?

Your body wants to maintain a constant supply of easily-accessible energy in the form of blood glucose sugar (like a fuel line to an engine). Just as you do not want to flood your engine, your body is careful to keep blood sugar levels in a narrow optimal range. "Flooding the system" with high amounts of sugar or refined carbohydrates triggers the pancreas to release a hormone called insulin. Insulin tells all your cells to take in and store excess energy, effectively removing it from the bloodstream. Insulin also turns off glucose production in the liver and fat burning in cells (there is no need to pull from savings if you have sufficient income).

## HOW DO YOU BECOME INSULIN RESISTANT?

If your diet is high in sugar and refined carbohydrates, your body is constantly pumping out insulin to keep your blood sugar in the optimal range. Over time, your cells can become desensitized to insulin constantly "knocking at the door". Like the boy who cried wolf, cells stop responding to insulin's signals, a phenomenon called *insulin resistance*. This leaves the excess sugar in the bloodstream, where it can damage the blood vessels (and contribute to inflammatory diseases). Similarly, the signaling pathway that controls production of new glucose in the liver is disrupted, resulting in unnecessary sugar production to add to the already elevated levels in the blood. This vicious cycle continues unless insulin sensitivity is restored through diet (reduce carb/sugar intake) and lifestyle (movement, sleep, regular meals, etc).

## CONSEQUENCES

- **HIGH BLOOD GLUCOSE**  
*because it is not properly lowered*
- **INCREASED INFLAMMATION**  
*from excess blood glucose*
- **HIGH INSULIN**  
*which promotes energy storage (weight gain)*
- **EXHAUSTED PANCREAS**  
*from high production of insulin & glucagon*
- **IMBALANCED HORMONES**  
*that are affected by the insulin imbalance*



*A sugary beverage on an empty stomach is a sure way to spike your blood sugar & insulin.*

*Type II diabetes occurs when the pancreas loses capacity to properly regulate blood sugar levels.*