Low Carb Livin'

(Insulin Resistance & the Benefits of a Ketogenic Diet)

TLDR Summary: *Insulin resistance and unwanted weight gain may seem like insurmountable obstacles, but a low-carb, low-sugar ketogenic diet paired with an active lifestyle can speed up your metabolism and prevent heart disease, weight gain, and other complications associated with insulin resistance.*

A 'ketogenic, or 'low carb' diet consists mainly of whole foods like low-carb vegetables and protein. If you are looking to lose weight, speed up your metabolism, and improve cardiovascular health to prevent hypertension and heart disease, diet and exercise are keys to your success.

The best alternative to high glycemic food consumption that leads to weight gain may actually be a ketogenic diet. Adhering to a ketogenic diet can help your body maintain healthy insulin levels and proper metabolic rate. But to understand how your diet relates to your body's storage of fat and insulin release, first you must understand what insulin is, and its function in weight regulation.

What (And Why) Is Insulin?

Insulin resistance is actually a much more common in the United States than most people realize. In fact, approximately a quarter of the population (1 in 4 Americans) suffer from IR (Goldstein, 2017 Aug 3). The 'above 50' age range seem most susceptible to insulin resistance, but it can almost affect anyone of any age. A number of factors can contribute to the presence of insulin resistance. Some of the most common include:

- Hereditary/family history of diabetes
- Smoking
- Weight gain
- Pregnancy
- Age
- Hormone issues

At its most basic level, insulin resistance is a simple overabundance of insulin. There may be many direct causes of this excess, all of which begin with the pancreas' role in digestion. Your pancreas' job is to make a hormone called insulin, which is then used by your body to

convert carbohydrates into cell energy. Eating processed or high-carb foods ('high glycemic foods'), causes a spike in blood sugar levels in order to break down the carbs.

Muscle cells are constantly burning energy, whereas accumulated fat cells do nothing after being stored in unwanted areas of your body. This is why higher muscle mass leads to a faster metabolism and thus a better use of your body's released insulin levels. An increase in insulin causes fat to increase, and thus, your weight.

When you eat a meal high in carbs, your blood sugar levels surge in order to break down the incoming carbs. Because of this, insulin is released. When this happens, it leads to a crash of low blood sugar. The crash associated with this plunge in blood sugar levels from the insulin release produces a false craving as your body desires another spike of blood sugar to combat the crash.

If your body must continuously create excess insulin to maintain a high-carb diet, it will create more than necessary. The extra insulin has nowhere to go, sometimes it gathers in areas of your body most susceptible to weight gain; i.e. your waist, stomach, and legs.

If your body continues to produce insulin as the result of a high-fat, high-carb diet, it can become desensitized to the presence of insulin in the bloodstream. Insulin resistance, then, is your body's reaction to an over-production of insulin.

The Basics of a Ketogenic Diet

A ketogenic diet places a heavy emphasis on low fat and whole foods; mainly, a significant daily intake of low-carb vegetables and protein. Those who partake in a ketogenic diet typically avoid 'white foods', high glycemic foods like white rice, potatoes, and pasta, in order to restrict the release of needless insulin. Examples of the fundamental whole foods included in a typical ketogenic diet:

- Protein (chicken, meat)
- Dairy
- High-protein nuts
- Low-carb vegetables

Green vegetables which are low in carbohydrates are excellent alternatives to high-glycemic foods. These low-calorie sources of necessary carbohydrates provide your body's with the fundamental energy to function without producing excess levels of insulin, or 'insulin resistance' (Goldstein, 2017 Aug 3).

Fighting Insulin Resistance

Every single carbohydrate your body must digest requires insulin in order to be properly broken down and redistributed as cell energy. Since low-carb foods contain less unnecessary, high-glycemic carbs, they use insulin much more efficiently. But beyond a low-carb ketogenic diet, there are a few other steps you can take to regulate your body's release of insulin on your own. These include, but are not limited to:

- **Exercise**
    - Daily activity and exercise are absolutely crucial to increase 'insulin sensitivity' so that your body does not continue to produce insulin beyond what is necessary to break down carbs in the food you eat.
- **Pair high-carb intake with an 'insulin sensitizer'**
    - You can aid in your body's breakdown of carbohydrates by pairing high-carbohydrate foods with an 'insulin sensitizer' like vinegar, spices, or foods with high acidic content. These help to break down unneeded insulin before it can be stored in your body as fat (Poliquin Group, 2014 Dec 17)
- **Omega intake**
    - Fish oil, salmon, and other methods of increasing your omega-3 intake can help minimize insulin production. Omega intake also raises your HDL cholesterol (good cholesterol) while lowering your levels of LDL cholesterol (bad cholesterol, which can clog arteries)
- **Decrease fructose intake**
    - Continuous intake of foods that are high in liquid fructose often lead to unwanted belly fat gain. Too much fructose can induce metabolic complications which can interfere with insulin regulation and fat storage (Poliquin Group, 2014 Dec 17)
- **Regular sleep schedule**
    - Sleep is essential for weight loss. A solid, regular sleep pattern leads to overall physiological stress reduction and muscle growth.

It is important to understand that even the smallest increase in dietary awareness and an active lifestyle can lead to the weight loss and healthy cardiovascular system that you desire. Insulin resistance can affect anyone, but if you educate yourself and increase your awareness of how to combat the effects of a high-carb diet, you will begin to see changes that can improve quality of life and relieve stress levels, as well as preventing heart disease and blood pressure complications down the road.

References:

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