

## MODULE 4 – ADDITIONAL HANDOUT

### Mid-Life Weight Gain: How To Reverse And Then Stop It Once And For All!

#### GOOD CARBS, BAD CARBS, AND INSULIN RESISTANCE

##### INTRODUCTION TO CARBOHYDRATES

Carbohydrates or "carbs" include both simple sugars and complex starches.

Simple sugars include monosaccharides (single molecule sugars like glucose and fructose) and disaccharides, which are double-molecule sugars like sucrose (table sugar) and lactose (milk sugar).

Refined simple sugars are found in candy and soft drinks. Natural simple sugars are found in fruits, juices and vegetables.

Simple sugars can bond together to form a complex starch. This happens when, for example, sweet peas become "starchy" with age.

All carbohydrates can be classified as:

- High glycemic index carbs, typically "Starchy" carbs, causing high insulin levels to be released.
- Medium glycemic index carbs.
- Low glycemic index carbs, typically "Fibrous" carbs, causing lower amounts of insulin to be released.

We referred to this in module 1 in terms of “glycation”, but here in the Weight Loss Module, we want to make sure that you understand exactly what is going on when you eat “carbs”.

BIG NOTE HERE:

People were told for years that FAT was making them gain weight, and so should eat a “high carb diet”, while we now know it was the CARBS that was causing the weight gain!

## WHAT IS INSULIN RESISTANCE?

100% of all carbohydrates are converted into glucose, which fuels the body. But glucose would be useless without insulin, which shuttles it into cells.

It is estimated that ONE OUT OF FOUR Americans are insulin-resistant, with the estimates being over 50% for those seeking weight-loss programs.

This means: cells won't let glucose in, unless there's an abnormally large quantity of insulin around.

As a result, insulin-resistant people frequently have higher than normal levels of circulating insulin. And remember: insulin = INFLAMMATION, right?

In some of them, this progresses to adult-onset diabetes. More often, it simply raises triglycerides, lowers the helpful HDL cholesterol, and increases the risk for high blood pressure, heart disease and obesity, especially "central" obesity.

These individuals also may have a family history of adult-onset diabetes.

On a biochemical level, when your insulin levels are too high, fat cell enzymes are activated. This means that high-glycemic index carbs ("starchy carbs") can be converted into fat for storage.

In addition, a burst of storage inhibits the production of glucagon, a hormone that opposes the fat storage action of insulin and releases body fat from the body's fat stores.

## SO WHAT SHOULD I EAT?

Remember from your diet analysis: 38-40% of your daily calories should come from carbohydrates.

If you've decided to fill out your Questionnaire and watch the Webinar "Mid-life weight gain-how to reverse and stop it for good", chances are you've tried to lose weight before.

You are statistically more likely to be insulin-resistant, so, we are going to make some suggestions for your diet that will take this into account.

And hopefully you DID see the materials in Module 1: "Why we age and how to slow it down," and the products recommended to:

- Help bring down your insulin levels (recall high insulin = inflammation),
- Help bring down your blood sugar levels (recall a higher than desired blood sugar = glycation).

If not, PLEASE go to that HANDOUT after reading this.

Oh -- and a word about "junk food"... Sugar is no more likely to give you an insulin surge than a baked potato -- surprise!

However, since sugary products have no nutritional value, we recommend that you keep them to a bare minimum (meaning zero) other than the sweet snack of 2 squares of 85% dark chocolate per day.