Insulin resistance plays a large role in increasing insulin levels. Increasing insulin levels tend to drive weight gain and obesity. Continuing from the previous post, we continue our exploration of the hormonal obesity theory. To start Hormonal Obesity part I, click here.

The question we need to answer is this. What causes Insulin Resistance? From other biological systems, we can guess that a good place to start is with *insulin itself*. Does insulin cause insulin resistance?

Let’s look at the evidence.

There are rare tumors called insulinomas that secrete abnormally large amounts of insulin. In these cases, patients will have very large increases in insulin but very little else wrong with them. In these cases, would the increase in insulin lead to insulin resistance?

This article “Patients with insulinoma show insulin resistance in the absence of arterial hypertension” answers that question.

Looking at the graph, it is clear that as the levels of insulin in the body go up and up, the levels of insulin resistance goes up and up. This is a protective mechanism + a very good thing, which is why the body does it.
If the body did not develop resistance to insulin, the high levels of insulin would rapidly lead to very, very low blood sugars. This severe hypoglycemia would quickly lead to seizures and death. Since we don’t want to die, the body protects itself by developing insulin resistance. This is a good thing.

The usual treatment of this condition is surgery to remove the insulinoma. Doing this reverses the insulin resistance and even the associated conditions such as acanthosis nigricans. The bottom line is this – high levels of insulin cause insulin resistance. Taking away the high insulin levels reverses the insulin resistance.

The next step is to see if we can give somebody insulin resistance. That’s what they did in the next paper “Production of insulin resistance by hyperinsulinemia in man” Diabetologia 28:70 –75, 1985 Rizza RA. 12 non-obese participants were given a 40 hour. One group was given higher and higher dose of insulin, the other was given saline (control group)

The blood sugar was kept stable by infusions of glucose. At the end of the experiment, subjects were tested to see if insulin resistance had developed. The subjects that had insulin infusion showed a significant 15% lower ability to use glucose compared to those that did not receive insulin. Put another way, the insulin group developed 15% greater insulin resistance.
The implication is this – I can make you insulin resistant. I can make anybody insulin resistant. All I need to do is give them insulin. But Insulin causes insulin resistance.

Another study shows the exact same thing, but with physiologic doses of insulin. “Effect of sustained physiologic hyperinsulinemia and hyperglycemia on insulin secretion and insulin sensitivity in man” Diabetologia Oct1994, Vol37, Iss 10, 1025-1035 Del Prato S. The previous study used doses of insulin that were much higher than seen naturally. This study uses doses of insulin that are often seen in humans.

The subjects were 15 healthy young men. They were given 96 hour constant infusions of insulin. These subjects are neither obese, nor pre-diabetic nor diabetic. They were normal healthy subjects. After 96 hours of insulin infusion, their insulin sensitivity dropped by 20–40%.

The implications are staggering. I can make these healthy lean men insulin resistant. Since type 2 diabetes is all about insulin resistant, that means that I can start these people on the road to diabetes and obesity within 3 days. High levels of insulin causes insulin resistance. They are as inseparable as a shadow to a body.
We see the exact same pattern in type 2 diabetic patients. Let’s look at this fascinating study “Intensive Conventional Insulin Therapy for Type II Diabetes” Diabetes Care 1993 16:23-31 Henry RR. The conventional (and disastrously incorrect) thinking at that time was that controlling the blood sugar is the most important part of diabetes.

You might think that the better you can control the sugar, the better the diabetes and you will be healthier. You might also be disastrously wrong and cause yourself irreparable damage.

But, that was the conventional thought. So they took these type 2 diabetics and intensified their insulin treatment to tightly control the blood sugars. They started on no insulin and by 6 months were taking 100 units a day. The sugars were very, very well controlled.

But what happened to their insulin resistance? The more insulin they took, the more insulin resistance they got. Since diabetes is a disease of insulin resistance, that means their diabetes was getting worse not
better! High levels of insulin causes insulin resistance.

<table>
<thead>
<tr>
<th>Parameter</th>
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<th>1</th>
<th>3</th>
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<tr>
<td>Total insulin dose (U)</td>
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<td>86 ± 13</td>
<td>92 ± 16</td>
<td>100 ± 24</td>
</tr>
<tr>
<td>Body weight (kg)</td>
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<td>97.2 ± 5.9</td>
<td>100.5 ± 6.5*</td>
<td>102.2 ± 6.8*</td>
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<tr>
<td>Weight gain (kg)</td>
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<td>7.0 ± 1.5</td>
<td>8.7 ± 1.9</td>
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<tr>
<td>Caloric intake (kcal/day)</td>
<td>2023 ± 138</td>
<td>1937 ± 122</td>
<td>1918 ± 121</td>
<td>1711 ± 119</td>
</tr>
</tbody>
</table>

Diabetes Care 1993 16:23-31 Henry RR

Here’s where things get really interesting. I’ve also said that insulin causes obesity. If this were true, you could expect that as we increase the dose of insulin from zero to 100 units/day over 6 months, that the patients would gain weight. True to form, that is exactly what happened. Patients gained 8.7 kg (19 lbs) over 6 months.

But look closely at their caloric intake. They were eating 300 less calories than at the beginning of the study. If you believe the Caloric Reduction as Primary (CRaP) theory – that it is all about reducing calories – you would be scratching your head wondering how you could reduce 300 calories per day and still gain almost 20 pounds.

But we know that calories are rather insignificant. The major question in obesity is this: What is driving up my insulin? Since insulin levels are way up, the body gains weight. Reducing calorie intake doesn’t matter. The body will only further reduce caloric expenditure to match and make the body gain weight. Insulin drives weight gain.

That brings us back to the question of weight gain. Insulin drives weight gain. But what drives insulin? The Carbohydrate-Insulin Hypothesis assumes that carbohydrate intake drives insulin, but that is incomplete. Insulin itself will drive insulin resistance which will increase insulin in a self-reinforcing cycle.
The longer and higher the insulin levels, the higher the insulin resistance. The higher the resistance, the higher the insulin. This is what sets into motion the time dependent effects of obesity. The fat get fatter. The longer you have obesity, the harder it is to eradicate. **Insulin Causes Obesity.**

Everybody knows about these time dependent effects. However, most current thinking about obesity completely ignores these effects even though they are plainly obvious to anybody and everybody. Since type 2 Diabetes is all about insulin resistance – this also leads us to the inescapable conclusion that **Insulin Causes Diabetes.**
CARBS ARE KILLING YOU!
WHY EATING FAT DOESN'T MAKE YOU FAT

Fat's got a bad rap. We've heard that curbing our consumption of fatty foods will help us lose weight. We've reduced our fat intake, but obesity is thriving.

So what gives? The answer: It's not fat's fault.

Instead, diets rich in carbohydrates have been secretly storing fat, slowly growing our waistlines and our obesity epidemic. Don't believe it? Here's how it happens.

HOW YOU GET FAT IN 12 SAD STEPS

1. You think about a meal containing carbohydrates.
2. You begin secreting insulin.
3. Insulin tells your body to store fatty acids and keeps you from burning it as energy.
4. You get hungry.
5. You start eating.
6. You secrete more insulin.
7. Digested carbohydrates enter your bloodstream as glucose.
8. Your blood-sugar levels rise.
9. You secrete more insulin.
10. Fat from your meal stays in your fat cells as triglycerides.
11. Fat cells get fatter.
12. Hi Glycemic Carbs

Processed High Glycemic Carbohydrates do this