

# What is Hyperinsulinaemia, Insulin Resistance & Impaired Glucose Intolerance

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After we eat carbohydrates (plant based foods) such as breads, cereals, pasta, rice and fruit, and protein eg meat, chicken, fish, our bodies produce a hormone called insulin. Insulin is like a key that opens up our cells and allow us to absorb the energy from these foods. It is this energy that enables us to do our every day functions such as walking the dog, running after the kids.

Some people can produce excess amount of this hormone commonly called **hyperinsulinaemia**. This occurs because the body doesn't recognise the insulin that is produced, thus the body continues to produce the hormone causing levels in the blood stream to rise above normal levels. This can eventually cause a drop in a person's blood sugar level.

In some cases the body the insulin is no longer effective as the body is resistant to it, and thus the body is not able to transfer blood sugar and energy from food to the body's cells causing elevated blood sugar levels to develop. This is commonly called **impaired glucose tolerance** or **insulin resistance**.

In both cases the following symptoms can be triggered:

- Difficulty with weight loss/abdominal weight gain
- Dizziness, nausea
- Light head
- Bloating
- Sugar cravings
- Headaches
- Tiredness/lethargy
- Itchy skin
- Night sweats, hot skin
- Difficulty sleeping
- Irritability
- Insatiable hunger
- Diarrhoea or constipation

## Dietary Guidelines

### **1. Weight loss**

Often insulin resistance & hyperinsulinaemia is associated with abdominal fat gain. If this fat is reduced then this can enable the hormone insulin to work more effectively thus improving blood sugar levels and insulin levels. Losing weight will also reduce other health risks.

### **2. Regular meals**

It is important that you eat at least 3 per day eg B.fast, Lunch & dinner, and avoid skipping.

### **3. No Added Sugar**

Sugar and sugar containing foods should be eliminated from you diet. This includes raw sugar, honey, jam, chocolate, lollies, soft drinks, cordials, biscuits, cakes, desserts.

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## **4. Avoid the excess consumption of foods containing high levels of natural sugar (your dietitian will provide you with the appropriate serves)**

Any foods that are naturally sweet contains high levels of natural sugar such as fruit juices (100%) and fruit juice drinks, dried and tinned fruit, yoghurt, ice cream and milk. It is important not to avoid these foods but to avoid consuming excess levels.

## **5. Reduce total fat**

Reduce your intake of high in fat foods such as margarine, butter, oils, full cream dairy produce, fatty meats, skin on chicken, coconut cream and milk, hi fat takeaways, fatty treat foods eg chocolate, biscuits, desserts, chips. Your dietitian will provide you with more information.

## **6. Alcohol in moderation**

Avoid all sugar containing premixed drinks eg Stoli™, Vodka Cruisers™, including drinks mixed with full strength soft drinks such as Coke™. Beer is also high in sugar so drink in moderation. The best types are dry white wines and spirits mixed with diet beverages. Red wine is the number one choice as it can also increase our good cholesterol HDL. Remember to drink in MODERATION.

## **7. Choose low glycaemic carbohydrates**

Glycaemic index (GI) is the measure of the effect of a carbohydrate food (CHO) on our blood sugar level. The lower the GI the slower the effect the CHO containing food has on our blood sugar level control and therefore is better.

Our major sources of carbohydrate come from plant foods such as breads, cereals, rice, pasta and fruit. The champion carbohydrate sources that have a lower GI are:

- Wholegrain or fibre enriched bread (Bürgen Soy™),
- Hi fibre breakfast cereals (natural muesli, Hi Bran Weet Bix™),
- long grain rice (Jasmine, Basmati),
- low GI protein enriched pasta (Vetta™ protein enriched pasta) ,
- Fresh fruit (apples, watermelon, berries)
- Vegetables, salads (green leafy particularly)
- Pulses and legumes (a good source of iron)

## **8. Reduce the glycaemic load of you dietary intake**

It is important to always include lean protein sources with lower GI carbohydrates as this lowers the overall GI of the meal even further.

The following are important lean protein sources:

- Lean meat, chicken and fish.
- Eggs (limit to 3 per week if you have hi cholesterol)
- Nuts (almonds, walnuts, sesame seeds) – your
- Low fat Cheese and dairy products (no added sugar)

## **9. Increase exercise**

Aim to do aerobic exercise at least 3 times per week for 30 to 60 minutes eg walk, swim, bike etc. Chat to your dietitian and doctor first.