



Type 2 diabetes

What is it?

Putting on more weight than you used to and finding that it is all going on around your stomach?

Having trouble losing excess body fat?

Feeling more tired than usual?

If any of these speak to you it may mean that glucose and insulin are not working in your body correctly putting you at greater risk of the above as well as type 2 diabetes.

One of the most important hormones that affects our metabolism is insulin. The main role of insulin is that it helps our cells store glucose (also helps us store protein and fat). Glucose is like the cell's petrol; it powers the cell and generates energy. However glucose cannot get into a cell on its own it needs insulin to attach to the cell and open it up so the glucose can get in. Think of it like the cell is a house, glucose are the people trying to get in and insulin is the key that opens up the house.

When insulin and glucose work well together your energy levels are great and you feel good. However when glucose and insulin don't play nice the results are disastrous. Health researchers have found over the last two decades an explosion of the condition called Insulin Resistance. This means that the cells of the body are no longer responding correctly to insulin. The fall out of this is that the body has to start flooding the blood stream with insulin and it is more difficult to get glucose into our cells, leaving us feeling fatigued. In 2004 the Aus Diab report suggested that 1 in 4 Australians over 25 years have some sort of glucose control problem. That's one quarter of the population!

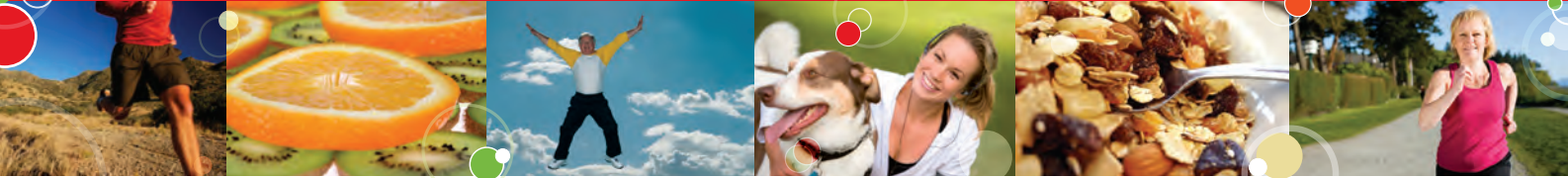
High insulin levels have the following negative impact on our health:

- Insulin in high concentrations shifts our body into storage mode, making us put on a lot of body fat.
- High insulin levels impair the breakdown of body fat (a process called lipolysis), making it far more difficult to lose body fat.
- High insulin levels make us preferentially store body fat around our stomach.
- Insulin Resistance can lead to the development of type 2 diabetes, Gestational diabetes and polycystic ovary syndrome

If insulin resistance is not addressed this condition can get worse and worse. The next stage is that you start to no longer be able to control your glucose levels and they start to increase. This stage is called Impaired Glucose Intolerance. Sounds fancy just means that your glucose levels are starting to climb.

Once again if this condition is not addressed it can get worse and progress into type 2 diabetes. The difference between IGT and type 2 diabetes is simply how high your glucose levels are. Normal fasting blood glucose levels are below 5mmol/L which is what you normally see at the normal or insulin resistance phase. Between 5 mmol/L and 7 mmol/L means that your fasting blood glucose levels are elevated and indicate IGT and finally when they start to climb over 7 mmol/L this suggests the presence of type 2 diabetes.

Type 2 diabetes



Once someone reaches the stage of type 2 diabetes their insulin and glucose are no longer working correctly in the body and their glucose levels tend to stay high.

Glucose in high concentrations start to attack and break down the body putting you at risk of the following:

- Heart attack, heart disease and stroke
- Amputation of limbs, particularly lower limbs
- Blindness
- Kidney disease
- High blood pressure
- Loss of nerve sensation and feeling in feet and hands
- Obesity
- Impotence
- Depression
- Decreased life expectancy of up to 15 years

How many people are affected?

In 2006, about 1.4 million Australians had diabetes. Diabetes was rated the fifth leading cause of death worldwide. Moreover, the number of people with diabetes has tripled in the last ten years. If this trend continues, 3.3 millions Australians will have diabetes by 2031, and the number will keep rising dramatically.

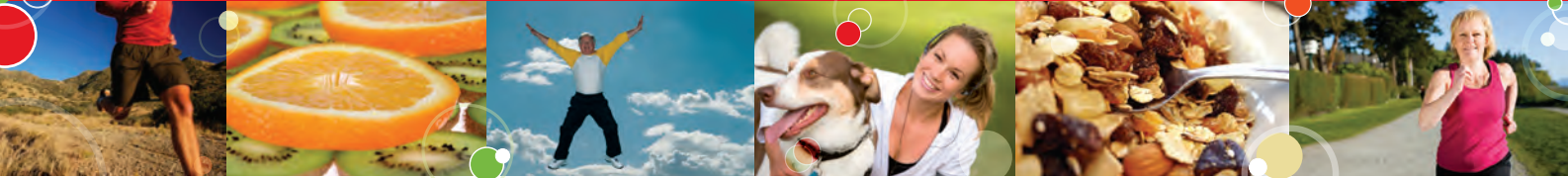
Another worrying trend is that more young people – even children – are being diagnosed with type 2 diabetes. In fact, the rate of diabetes in Australian children is rising by five to ten per cent each year. This is linked to the increasing numbers of obese children and a reduction in physical activity. It's a tragedy that any child should be headed towards a life of ill health, disease and early death when it could be prevented.

Risk factors & symptoms

Unlike a heart attack or a broken leg, type 2 Diabetes doesn't actually have many signs or symptoms. Most people are diagnosed without any significant signs other than putting on weight and finding it hard to loose weight. Mostly there are just risk factors:

1. A family History of type 2 diabetes;
2. Being 55 years of age or over;
3. Being aged 45 years or over, if you have high blood pressure or overweight;
4. Being over 35 years of age if you are of Aboriginal or Torres Strait Islander background;
5. Little or no physical activity;
6. Carrying excess weight around their stomach.

Type 2 diabetes



The main symptoms of type 2 diabetes usually come on when the condition is quite progressed and severe.

- Being very thirsty for no obvious reason
- Being very tired and lethargic
- Slow healing cuts and sores
- Passing more urine than usual
- Headches
- Blurred vision
- Mood Swings

Prevention:

There are 3 main things that affect your chances of getting type 2 diabetes

1. Your genetics (some peoples genetic profile puts them at greater risk of type 2 diabetes, while other people's genetic profile protects them from this condition)
2. Your level of body fat (High levels of body fat put you at risk of type 2 diabetes as they interfere with how glucose and insulin work in the body. In particular it is body fat around your waist that puts you at most risk)
3. Your lifestyle – How much you move in a day, whether you do formal exercise and how much and what you eat. (Exercise and general activity increases the effectiveness of insulin in the body helping you to manage your glucose levels and keep your insulin levels low. In addition a high fat diet and a diet high in processed carbohydrates also puts you at risk of type 2 diabetes as they interfere with the action of glucose and insulin.

Now there is not much you can do about your genetics, but you can affect your level of body fat and the lifestyle you lead.

Manage it:

Don't underestimate what you can do!

Unlike some other diseases, like cancer or polio, we have so much influence over type 2 diabetes. While type 2 diabetes has a genetic component, is very much a lifestyle disease. What we put in our mouths and how much we move has a massive impact both on our chances of developing it and how well we manage it if we do.

Support

There are many places you can get support! Your local GP is your first port of call but there are many organizations your can look up online.

The Glucose Club	www.theglucoseclub.com.au
Diabetes Australia	www.diabetesaustralia.com.au
Diabetes NSW	www.diabetesnsw.com.au
Diabetes SA	www.diabetessa.com.au
Diabetes VIC	www.diabetesvic.org.au
Diabetes ACT	www.diabetes-act.com.au
Diabetes WA	www.diabetes.health.wa.gov.au
Diabetes QLD	www.diabetesqld.org.au
Diabetes TAS	www.diabetestas.com.au
Baker IDI	www.bakeridi.edu.au