

GOOD NUTRITION FOR TYPE 2 DIABETES

Approximately 1 million Australians have been diagnosed with Type 2 Diabetes, whilst a similar number live with the condition but are yet to be diagnosed. It is the *fastest* growing chronic disease in Australia, yet up to 60% of cases can be prevented. Many more of our population have the conditions of glucose intolerance and insulin resistance, which are pre-diabetic states that potentially lead to Type 2 diabetes. This lifestyle related disease is greatly increasing in our community as a direct result of increases in the prevalence of overweight and obesity as well as lowered physical activity levels.

Diabetes can have serious implications for health. The aim of diabetes management is to prevent complications, including permanent damage to the eyes, kidneys and nerves; as well as the prevention of peripheral vascular disease (which can lead to ulcers and amputations), heart attack and stroke. Damage to the body occurs when blood glucose levels are continuously elevated. Proper management of diabetes, particularly in relation to diet and exercise, results in a more normal range of blood glucose levels, thus preventing lifelong damage to the body's organs.

DIET AND LIFESTYLE

Diet and lifestyle are the two factors that we can control. Weight management, a healthy diet with plenty of physical activity, avoidance of smoking and moderation of alcohol consumption are essential in the management of diabetes. Exercise and physical activity can assist greatly in reducing blood glucose levels as the working muscles use the blood's glucose for energy production. Having a higher muscle mass also assists in the maintenance of normal blood glucose levels as the skeletal muscles readily take up and store glucose.

Lifestyle intervention studies in individuals with diabetes and pre-diabetes show a major impact in preventing and reducing diabetes development. These studies incorporate physical activity such as brisk walking, cycling or jogging (for a *minimum* of 30 minutes on most, if not all days of the week), reducing body weight if overweight, increasing dietary fibre and reducing saturated fat in the diet. The results from these studies using lifestyle changes show a significantly greater benefit in the reduction of diabetes progression than taking Metformin; a commonly prescribed diabetes medication.

Smoking has been shown to be associated with an increased risk of developing Type 2 Diabetes, as well as increasing the complications of diabetes, such as cardiovascular disease, leg ulcers and amputations. Your pharmacy can advise on smoking cessation treatments that have been proven to work.

DIETARY RECOMMENDATIONS

WEIGHT LOSS

Type 2 diabetes most commonly occurs as a result of being overweight or obese. In particular, abdominal adiposity is the major factor in insulin resistance and drives the development of diabetes. A waist circumference of >80cm for females or >90cm (Asian) / >94cm (Caucasian) for males is associated with an increased risk of type 2 diabetes. A reduction in body weight of just 5-10% makes a significant difference, even if that does not achieve a body weight within the healthy weight range.

Weight loss, if overweight or obese, should be slow and gradual and include sustainable lifelong changes in eating habits. It is essential to exercise during weight loss to maintain muscle mass and

we know what matters

prevent the slowing of metabolic rate. An energy deficit (using more energy than you consume) must be produced for weight loss to occur. Proven strategies for weight loss in diabetics includes significant reduction in the intake of fats (particularly saturated fats), sugars and processed foods. Consuming smaller servings, along with an increase in the proportion of high fibre foods, such as vegetables and wholegrain products is important in sustainable weight loss.

DAILY FOOD INTAKE

It is beneficial to consume regular meals and snacks throughout the day, commencing with a healthy breakfast. A large carbohydrate intake in a meal will cause a large rise in blood glucose. Instead, the food and carbohydrate intake should be distributed evenly over the day to minimise large peaks (highs) and drops (lows) in blood glucose levels.

CARBOHYDRATES

Some carbohydrate should be consumed at each meal and snack; with some low glycaemic index (GI) carbohydrate in each meal. The GI ranks foods according to their ability to raise blood glucose levels:- a high GI meal produces a rapid rise in glucose levels. GI is less important than GL (glycaemic load). GL takes into account both the amount of carbohydrate in the food as well as it's GI. The nutritional quality of the food is also a factor that is more important than just considering the GI. Just because a food has a low GI does not mean it is a good food choice. The GI and GL of commonly eaten foods, as well as useful advice on their relationship to blood glucose levels, can be found at www.glycemicindex.com.

Low carbohydrate diets are not recommended; although avoiding low nutritional value carbohydrates (such as white bread, cakes, sweet biscuits and lollies) is important. Reducing serving sizes of carbohydrates can assist with weight loss.

Those with diabetes can include small quantities of sugar in their dietary intake; however the avoidance of high sugar foods and drinks is definitely recommended. Healthier alternatives such as a glass of low fat milk, a piece of fruit, some raw vegetables or a small handful of unsalted nuts are ideal snacks. Foods sweetened with added fructose are best avoided by diabetics as fructose is a sugar (derived from fruit), which will elevate blood glucose.

FAT INTAKE

The intake of saturated and trans fats should be minimised. These fats are mainly found in animal products and processed or deep-fried foods. Replacement of these fats with healthier monounsaturated and polyunsaturated fats is recommended; eg olive or canola oils. A major dietary intervention study found that a diet with a higher proportion of monounsaturated fats *reduced* fasting blood glucose levels, whilst the low fat diet and 'usual' diet lead to *increased* blood glucose levels and thus the progression of diabetes. High levels of monounsaturated fats are found in olive, canola and peanut oils, while wholegrains, avocados, nuts, legumes and seafood all contain healthy fats.

Consumption of 2 to 3 servings of fish per week is recommended, choosing mostly fish which is high in omega 3 fats such as salmon, mackerel, sardines and tuna. Alternatively, fish or krill oil capsules, or flaxseed oil, can be taken daily to obtain these essential omega 3 fatty acids.

DIETARY FIBRE

A fibre intake of 14g per 4200KJ can assist in the stabilising of blood glucose levels. This is equivalent to approximately 30g of fibre per day. Whilst insoluble fibre helps to keep us regular, soluble fibre from vegetables, fruits, legumes and nuts helps us to feel full and also slows down the absorption of blood glucose in the small intestine, thus assisting in the regulation of blood glucose levels within a healthy range.

ALCOHOL

Alcohol has many risks for those with diabetes, such as increasing blood pressure, affecting blood sugar levels and reducing the ability to achieve or maintain a healthy weight. While alcohol is high in kilojoules it has been found that it doesn't assist in helping you to feel full; that is, alcohol kilojoules are additive to normal energy intake. Alcohol also promotes fat storage.

If choosing to drink alcohol, consumption should be moderate, which means no more than 1 standard drink per day for females and a maximum of 2 standard drinks per day for males. At least two days each week should be alcohol free. If consuming alcohol, be careful to eat a carbohydrate containing meal or snack at the same time, to ensure blood glucose levels do not drop too low and result in a 'hypo'.

ENJOYING LIFE

Having diabetes doesn't have to prevent you from enjoying life and enjoying tasty, nutritious food. In fact, you will probably find that positive changes to your lifestyle such as increasing the amount of physical activity that you do and eating better will leave you feeling much happier and healthier. Enjoy life to the fullest whilst knowing that you are taking care of yourself as best you can. Remember; it is the person with diabetes who is the one who is ultimately responsible for managing their diabetes and making and maintaining healthy changes to your diet and lifestyle is definitely worthwhile!

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