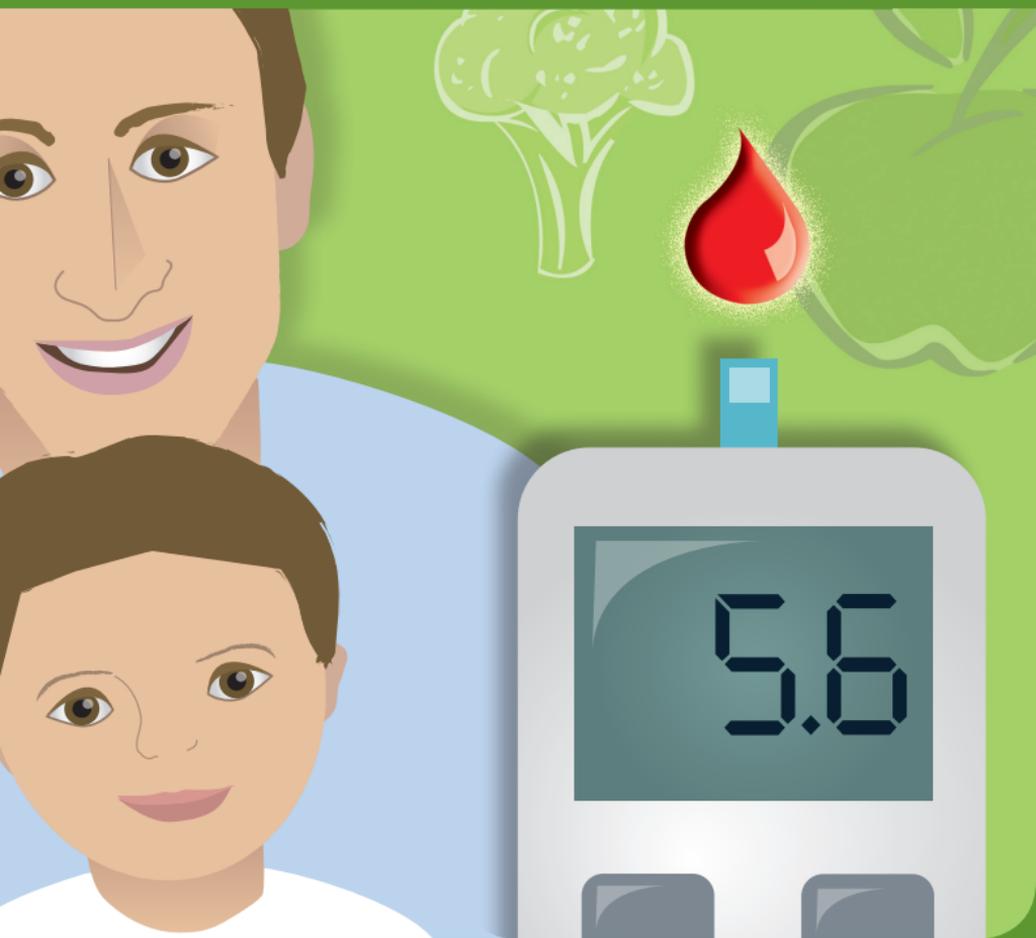


Diabetes – Are you at risk?



Talk to

Chemmart[®]

PHARMACY

Diabetes

At Chemmart® Pharmacies we talk with our customers every day about their health. Our experience gives us a good idea of the more common health concerns – the questions people ask and the simple treatments that work.

Now we've brought all this knowledge together to produce a series of Chemmart® health booklets. The booklets cover many different topics – from everyday health problems that most of us experience from time-to-time, to more serious health conditions that need careful management.

We haven't filled the booklets with medical jargon, just ordinary language that helps take the mystery out of many health issues.

This booklet is one of the many Chemmart® Pharmacy tools for *keeping you healthy*. Please talk to your pharmacist if you need to find out more.

Your Chemmart® pharmacist and staff.



Fast Facts

In Australia, diabetes has reached epidemic proportions: almost one in every four Australians aged over 25 has diabetes or pre-diabetes.¹

There are 750 000 adults in Australia have Type 2 diabetes but don't know it.

On top of that, millions of Australians have risk factors for developing Type 2 diabetes.

Diabetes is the name for a group of conditions where the body doesn't produce enough insulin or the insulin produced doesn't work properly. This results in too much glucose in the blood.

There are three different types of diabetes: Type 1, Type 2 and gestational.

Another condition, called pre-diabetes, greatly increases the risk of

developing Type 2 diabetes in the future.

Pre-diabetes is also associated with an increased risk of heart disease.

Learning more about the risk factors for diabetes means you know when to see your doctor to have a blood test for diabetes.

If you have risk factors for diabetes, have pre-diabetes or have had diabetes during pregnancy, healthy lifestyle changes can greatly reduce your risk of developing Type 2 diabetes and also help protect you against heart disease.

Are you at risk of diabetes?

Every day, 275 adults in Australia are diagnosed with diabetes.¹

At the moment, around 1.5 million adults in Australia have diabetes¹ - the problem is half of them don't know it! Could you be one of them?

Adults in Australia who have diabetes:

Already diagnosed:

750 000

Not yet diagnosed:

750 000

There are certain things - like getting older, having a family history of diabetes, being overweight and having pre-diabetes that increase your risk of getting diabetes. As a nation that is getting older and fatter, diabetes is a health issue that we all need to take seriously.

Diabetes *isn't* something that happens to other people, it is a very real health risk that Australians of any age (and that includes children) need to sit up and take notice of.

Diabetes is a major cause of heart disease, kidney failure, blindness, amputations, impotence and birth defects and can shorten life expectancy by up to 15 years.¹

On a much more positive note, early diagnosis, proper management and education can prevent or delay all of these health problems.

So what can you do about it? Start by finding out more about the risk factors for diabetes on page 8 of this booklet. If any of these apply to you, see your doctor for a blood glucose test to check for diabetes. Your doctor may also recommend you be screened for other heart disease risk factors such as abnormal blood fats (cholesterol).

If you have any of the risk factors for diabetes, but you are lucky enough not to have the disease, then you can plan to keep it that way by following our suggestions for a healthy lifestyle. There will always be risk factors that you can't change (like your relatives or your age) but *anyone* can switch to healthy eating and regular physical activity, and lose weight if they need to.

If your doctor has told you that you have pre-diabetes or you have had gestational diabetes, then you can delay or reduce your risk of developing Type 2 diabetes by making healthy lifestyle choices.

You'll find the rest of this booklet filled with simple, practical ideas to help you make those healthy lifestyle choices part of your everyday life.



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Understanding diabetes

What is diabetes?

Diabetes is a condition where the pancreas gland no longer produces enough insulin, or the insulin that is produced doesn't work properly.

Insulin is a hormone that works like a key - opening the door to let glucose move from the blood into our body's cells. Once the glucose is in our cells we can use it for energy.

When someone has diabetes, these keys stop being made or the keys can't work properly to let the glucose in. This causes glucose to build up in the blood. If diabetes is not treated, these high blood glucose levels cause the short and long-term health problems related to diabetes.

What are the different types of diabetes?

There are three types of diabetes as well as a condition called *pre-diabetes*.

Type 1 diabetes

This used to be called juvenile onset or insulin-dependent diabetes.

Type 1 diabetes affects 10–15% of people with diabetes - mostly younger people. This type of diabetes develops when the body attacks itself by destroying the cells that make insulin (called an autoimmune response).

People with Type 1 diabetes need insulin injections for the rest of their lives and are encouraged to follow a healthy eating plan and be physically active.

Type 2 diabetes

This used to be called mature onset or non-insulin dependent diabetes.

Most people with diabetes (about 85–90% of diagnosed cases) have Type 2 diabetes. Type 2 diabetes mainly affects adults, but Australia's growing obesity rates and sedentary lifestyle means it is increasingly affecting younger people and even children.

People who have this type of diabetes either can't produce enough insulin for their body's needs or the body cells are blocked from using the insulin properly—this is called insulin resistance. People with Type 2 diabetes are encouraged to follow a healthy eating plan and be physically active.

Many people with Type 2 diabetes are overweight, and so losing weight or maintaining a healthy weight is an important part of diabetes management. If lifestyle changes do not control diabetes, then a doctor may also prescribe diabetes tablets.

Over time, people with Type 2 diabetes produce less insulin, and within 10 years of being diagnosed, 50% of people with Type 2 diabetes will go on to need insulin injections to replace the insulin that their bodies can no longer make.²

Gestational diabetes

About 3–8% of women are diagnosed with a temporary form of diabetes during their pregnancy, due to the effect of pregnancy hormones on their blood glucose levels.³ This is called gestational diabetes and will usually go away once the baby has been born. All women in Australia are tested for this condition between their 24th and 28th week of pregnancy.

Pre-diabetes

At least 2 million Australians have pre-diabetes, a condition where blood glucose levels are higher than normal but not high enough to be diagnosed as diabetes.⁴ People with pre-diabetes are one step closer to having diabetes and are already at increased risk of heart disease.⁴ Healthy eating, regular physical activity and losing weight (if necessary) can delay or decrease the risk of pre-diabetes progressing to diabetes.

Are you at risk of Type 2 diabetes?

Look through the following list and tick any of the risk factors for diabetes that apply to you. If you tick any of the items then you should talk to your doctor about having a blood test to check for diabetes.

Are you at risk of Type 2 diabetes?	Yes
I have been diagnosed with pre-diabetes: this includes Impaired Fasting Glucose (IFG) or Impaired Glucose Tolerance (IGT)	
I am over 45 years and am overweight (If you're not sure, go to page xx to calculate your BMI or measure your waist)	
I am over 45 years and have high blood pressure	
I am over 45 years and have a family member/s with diabetes	
I am over 55 years	
I have heart disease or have had a heart attack or stroke	
I am a woman with polycystic ovary syndrome and am overweight	
I have had gestational diabetes (high blood sugar while pregnant)	
I am over 35 years and have an Aboriginal or a Torres Strait Islander background	
I am over 35 years and come from an ethnic background where Type 2 diabetes is more common - this includes Melanesian, Polynesian, Chinese and Indian subcontinent backgrounds.	

Reducing your risk

Even if you already have risk factors for diabetes, have had gestational diabetes or have pre-diabetes, there's plenty you can do to reduce your risk of developing diabetes.

You can't change your age...

You can't change your family history...

But you can change your lifestyle!

Combining healthy eating with regular physical activity and losing weight if you need to will help to reduce your risk of diabetes.

Research shows that quite simple and achievable lifestyle changes can reduce the chance of impaired glucose tolerance or (IGT) from progressing to Type 2 diabetes by 50–55%.⁵

These same healthy lifestyle changes can also help to reduce high blood pressure and abnormal levels of blood fats, including cholesterol - all of which can adversely affect your health.

How does your weight check out?

There are a couple of scientific ways for adults to check their weight. The first is to calculate your Body Mass Index (BMI), which shows the relationship between your weight and height. The second is to simply measure around your waist.

Calculating your BMI

To calculate your BMI, just divide your weight in kilograms by your height in metres squared. (To square a number you multiply it by itself.) If you are in a healthy weight range, you will arrive at a number between 20 and 25.

Here's an example:

$$\begin{aligned} \text{Weight} &= 75 \text{ kg} \\ \text{Height} &= 1.65 \text{ metres (squared = 2.7)} \\ \text{So, BMI} &= \frac{75}{2.7} = 27.8 \end{aligned}$$

(Time for some lifestyle changes!)

What does my BMI mean?

BMI	Category	Health risk
Less than 18.5	Underweight	Long-term health risks
18.5–24.9	Healthy weight range	Average
25.0–29.9	Overweight	Some health risks
30.0–34.9	Obesity class I	High health risks
35.0–39.9	Obesity class II	Severe health risks
Greater than 40	Obesity class III	Very severe health risks

Adapted from National Health and Medical Research Council (NHMRC). *National Evidence Based Guidelines for the Management of Type 2 Diabetes Mellitus. Part 2: Primary Prevention of Type 2 Diabetes.* 14 December 2001.

Available online at www.nhmrc.gov.au

The healthiest BMI for you may depend on your age, activity level and ethnic background; so always check with your doctor about the healthiest BMI for you.

Measuring your waist circumference

Another way to check your weight and your risk of health problems is to measure your waist. The advantage of this method is it's so simple. It's also a very helpful measure of weight because we know that fat stored around your middle is more likely to be associated with Type 2 diabetes and a health condition called metabolic syndrome, which increases the risk of heart disease and is often associated with Type 2 diabetes.

Use a tape measure to measure your waist halfway between the bottom of your rib cage and the top of your pelvis.

For Caucasian* men: a waist measurement of 95cm or more means you should not gain any more weight. If your waist measures over 100cm, studies suggest you need to lose weight.

For Caucasian* women: a waist measurement of 80cm or more means you should not gain any more weight. If your waist measures over 90 cm, studies suggest you need to lose weight. ⁶

We have rounded these measurements to the closest mark on the measuring tape to make them easier to record. If you see other recommended waist measurements that are slightly different from this, it may be because the measurements have not been rounded.

If your BMI calculation or waist measurement (or both) suggest you are overweight, then it's time to work out a healthy eating plan and to enjoy some extra physical activity to get yourself back in a healthy weight range. Every kilogram you lose on the way back to a healthy weight makes a difference to your health.

* What if I'm not Caucasian?

Waist measurement recommendations are different for other ethnic groups because of a different relationship between waist measurement and body fat distribution. If you are not Caucasian, please ask your doctor about the waist measurement recommendations that apply for your ethnic background.

The best way to lose weight is by following a sensible eating plan that includes plenty of fresh, unprocessed foods and limits processed, fatty and sugary foods.

A balanced eating plan is all about enjoying a wide variety of foods. If you are overweight, you may need to eat less of certain foods.

Eating for health

Here are some ideas to head you in the right direction:

- Include plenty of wholegrain breads, grains, legumes (dried beans and lentils), fruit and vegetables in your new style of eating.
- Steer away from fatty, fried foods and go for fresh, light foods bursting with flavour.
- Choose lean cuts of meat and poultry - trim the fat from meat and remove skin from poultry.
- Enjoy more fish for it's great flavour and health benefits. With some fresh fish and salad ingredients in the fridge, you can have dinner on the table in 15 minutes.
- Switch to low fat dairy products. There are so many low fat milks and yoghurts that taste great - try some!
- Drink 6–8 glasses of water each day.



- Watch the size of your portions - try using a smaller plate at meal times.
- Moral support is a big help when you need to lose weight. Many hospitals and community health centres run weight loss programs in a friendly, helpful atmosphere. A dietitian can also help - you can call the Accredited Practising Dietitian's (APD) Hotline on 1800 812 942 to help you find a dietitian, or go to www.daa.asn.au
- Selected Chemmart® pharmacies also conduct weight management programs. Please ask if this program is available in your local store or in a store that is convenient to you.

Using the glycemic index (GI) to help you make healthier food choices

The glycemic index (sometimes spelt glycaemic in Australia) is a helpful tool that you can use to make healthier food choices. The glycemic index or GI is a ranking of how much the carbohydrates in different foods will raise your blood glucose level.

Carbohydrates with a low GI are slow to digest and result in a slower, flatter rise in your blood glucose levels. Carbohydrates with a high GI are quick to digest and result in a faster and higher rise in blood glucose levels. (If you get mixed up about how low and high GI foods work, just remember *low* means *slow* - which is what you want most of the time.)

Many people are now starting to talk about the glycaemic load or GL of foods. The GL is another scale that measures the effect that a *normal serving size* of a particular food has on blood sugar levels. Using the GL may be helpful because it puts the GI in the context of everyday eating.



Eating a low GI or GL diet may help you to:

- Lose weight
- Feel fuller for longer and reduce hunger pangs
- Improve your body's sensitivity to insulin
- Reduce your risk of developing diabetes, high blood pressure and heart disease
- Improve control of diabetes if you already have it⁷

It is important to remember that the GI alone does not determine 'good' or 'bad' foods. For example, potato chips and chocolate are low GI but are high in fat.

So how do I put low GI eating into practise?

Here are some simple ideas that can help you get started with a healthy eating plan that also includes low GI foods:

- Choose breakfast cereals that are based on oats, barley and bran, or are made from many different whole grains.
- Choose dense, grainy breads and heavy fruit breads.
- Enjoy plenty of vegies and fruits, but cut back on potatoes (sweet potatoes make a good substitute).
- Include more legumes in your diet: lentils, chickpeas, red kidney beans and cannellini beans make a great addition to all kinds of soups, casseroles and pasta dishes. See our easy recipe on page 18.
- Choose Basmatti or Doongara rice, rather than other rice varieties.

- Eat lots of salads: fill a bowl with your favourite salad veggies, leafy greens and fresh herbs. Dress them up with a little extra virgin olive oil and a good squeeze of lemon juice.
- Try to include at least one low GI food at each meal.

To learn the GI or GL value of many foods and to understand more about the science behind it, go to www.glycemicindex.com or pick up one of the many books on GI from your local bookshop or library.

To help you get in the swing of healthy low GI eating, try the fabulous meal-in-a bowl recipe over the page. It's quick, tasty, and very satisfying.



Tuscan bean and vegetable soup

Serves 4–8

Use this recipe as a starting point, adding your favourite veggies and beans, and using more or less of the suggested ingredients to suit your taste. Even though it looks like there are lots of ingredients, this soup is really quick and easy to prepare.

Leftovers are great taken to work for lunch the next day.

- 1 tablespoon extra virgin olive oil
- 1 onion, diced
- 1 teaspoon dried oregano
OR 1 tablespoon fresh oregano
- Pinch of dried chilli flakes or more to taste (optional)
- 2 sticks celery, diced
- 2 carrots, diced
- 3 zucchini, diced
- 2 cloves garlic, finely chopped
- 2 litres water or no added salt vegetable stock
- 1 can diced tomatoes OR 4 large ripe tomatoes, diced
- 2 large handfuls of green beans, cut into 1 cm lengths
- 1 cup small shell or tube pasta
- 1 400 g can borlotti beans, well rinsed
- 1 400 g can cannellini beans, well rinsed
- Freshly ground black pepper
- Diced ripe tomato, chopped fresh parsley and flaked parmesan to serve

Warm the olive oil in a large soup pot and gently cook the onions, herbs, chilli (if using) celery and carrots until they begin to soften - about 5 minutes.

Add the zucchini and garlic and cook for a couple more minutes. Add the water or stock and tomatoes and bring to the boil. Cook for 10 minutes to allow the flavours to develop.

Add the green beans and pasta. Simmer gently for about 5 minutes or until the pasta is roughly half-way through its cooking time. Stir in the canned beans and simmer until the pasta is just cooked and the beans are heated through.

Grind in plenty of black pepper to taste.

Ladle into deep bowls and top each serve with some diced fresh tomato, chopped parsley and flaked Parmesan.

Enjoy!

If you're not serving the soup straight away, cook the pasta separately and add it just before serving.



Being active for life

Keeping active is one of the best things you can do for your overall health and it can also help reduce your risk of developing Type 2 diabetes. Being active helps your body to use insulin better, and can help you lose weight and keep it off for longer than healthy eating alone.

To enjoy the health benefits of being active, aim for at least 30 minutes of activity on most days of the week. If you don't have time to do 30 minutes in one hit, adding it up in three lots of 10 minutes or two lots of 15 is fine.

If you also need to lose weight, you will need to be active for more than 30 minutes a day.

Here are some ideas to get you started:

- Decide to make the most of everyday opportunities to be active: take the stairs instead of the lift, walk to the post box to send your mail, walk to school with the children, choose the *furthest* car park space from the shopping centre entrance - there are so many opportunities to be active when you start looking for them!
- Rather than thinking 'I must be active', think about the types of activities you really enjoy, or have enjoyed in the past and plan to fit some of them into your daily life. You might choose anything from belly dancing or bush walking to lawn bowls or yoga.
- Go for a 30 minute walk at lunchtime - ask some friends or work mates to join you.
- Take the dog for a walk - good for the health of you both!
- Go for a swim or join an aqua aerobics (water exercise) class.

- Use a pedometer to see how many steps you do in a day. Over time, increase your number of daily steps, aiming for 10 000 steps a day.
- Contact your local community health centre, gym, council or keep fit association to find out about activities they offer.

Before long, you'll be looking forward to being active and enjoying how good it makes you feel. Try keeping an activity diary and write down how you feel after different activities. Next time you're not motivated to keep moving, read over your diary and re-inspire yourself.

A couple of safety reminders

- **Talk to your doctor before you start a new activity program if you are over 40, haven't exercised for many years, are very overweight, you smoke or have any other medical conditions.**
- **Start slowly and gradually build up the amount and intensity of your physical activity.**

Congratulations on choosing new ways of eating and moving to reduce your risk of Type 2 diabetes.



More help for people with diagnosed diabetes

Become a member of Diabetes Australia

Diabetes Australia is a not-for-profit, member-based organisation carrying out vital work in diabetes awareness, education and research.

Becoming a member of Diabetes Australia by paying an annual subscription provides you with many benefits including discounts for diabetes products and services, information and advice on healthy eating and physical activity, and access to local community support groups in some areas.

Register for the National Diabetes Service Scheme (NDSS)

The NDSS is an initiative of the Australian Government that is administered by Diabetes Australia. The program makes subsidised products and services available to Australian residents with diabetes.

Once you have registered for the free NDSS service, you can enjoy access to free syringes and needles, greatly reduced prices on blood and urine testing strips and a range of information and education opportunities.

For more information about Diabetes Australia membership or the NDSS, please call Diabetes Australia on 1300 136 588.

Information sources used in this booklet

The information in this booklet has been compiled from numerous medical sources including:

- ¹ Dunstan D, Zimmet P, Welborn T et al. *The Australian Diabetes, Obesity and Lifestyle Study - AusDiab 5 Year Follow-up 2005*. Melbourne: International Diabetes Institute. Available to purchase online at www.diabetes.com.au (click on the AusDiab logo to access all AusDiab reports)
- ² www.diabetesaustralia.com.au Diabetes Australia fact sheet: *Medications for Type 2 diabetes*, revised August 2006.
- ³ www.diabetesaustralia.com.au Diabetes Australia Fact Sheet: *What is diabetes?*, revised August 2006.
- ⁴ www.diabetesaustralia.com.au Diabetes Australia media release: *Dream results from more than 2 million Australians*. Canberra, September 2006.
- ⁵ www.diabetes.com.au International Diabetes Institute. Choose 'Diabetes Explained' and then choose 'Preventing Diabetes'.
- ⁶ National Health and Medical Research Council (NHMRC). *National Evidence Based Guidelines for the Management of Type 2 Diabetes Mellitus. Part 2: Primary Prevention of Type 2 Diabetes*. 14 December 2001. Available online at www.nhmrc.gov.au
- ⁷ Professor Jennie Brand Miller, Kaye Foster-Powell and Professor Stephen Colagiuri. *The new glucose revolution: the glycemic index solution for optimum health*. Adelaide: Hodder, 2002.



Also take a look at www.glycemicindex.com

You can also find a wealth of information about diabetes on the Diabetes Australia web site at www.diabetesaustralia.com.au



The Chemmart® team wishes to thank Diabetes Australia for their information and assistance in preparing this booklet. This book was reviewed by Diabetes Australia Ltd's Health Care and Education Committee (HCEC) in February 2008 and is endorsed for publication until February 2009.

If you would like to find out more about preventing and managing diabetes, contact your local office of Diabetes Australia for the cost of a local call from anywhere in Australia on 1300 136 588.

Important note

The aim of this booklet is to provide you with general information about a particular health care topic. Every effort has been made to ensure that the content is accurate at the time of writing.

However, medicine is an ever-changing science, and each person's medical condition is individual. You must not rely on the information in this booklet to diagnose or treat any medical condition. You should obtain specific information from your doctor before starting any health treatment and should always check with your health care professional before using any of the pharmaceutical products mentioned in this booklet.

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