



Take a positive step

Your guide to positively managing diabetes



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If you think you have a medical or psychiatric emergency, call 000 or go to the nearest hospital. If you are not sure what sort of care you need, please call your doctor or local hospital.

There are a number of products and services mentioned throughout this brochure for which MBF does not pay a benefit such as some doctor consultations and some complementary therapies. The information in this brochure relates only to the particular MBF Positive Health Program in question and does not represent which products and services may or may not be covered under your level of MBF cover.

The information provided in this brochure is current and correct as at 1 April 2007.



The MBF Diabetes Management Program

The MBF guide to positively managing Diabetes is for adults and the parents of children with Diabetes. Based on current research, it offers practical advice and information to help you look after your good health and make the most of life – while still controlling your Diabetes.

The guide is part of the **MBF Diabetes Management Program**, one of the programs MBF Health offers at no additional cost to help members with MBF hospital cover to better manage their health conditions.

The Program enables members to access tools and resources such as:

- an MBF Diabetes Action Plan that you can take to your doctor to fill in (you will find it at the back of this guide) along with some background information on what Diabetes is and how to reduce its impact on your health and everyday living;
- a Personal Health Record to record your personal health details such as the dates and results of your check-ups;
- specific information about Diabetes; and
- a professional nursing telephone service trained to answer your queries on general health.*

*Operated by ETI Australia Pty Ltd, trading as Mondial Assistance.

Remember, following a written MBF Diabetes Action Plan that's been developed especially for you can help reduce the long-term complications of Diabetes. It usually takes several visits to your doctor to work out the best Action Plan for you and to review how well your medicines and lifestyle changes are working. The Plan may also need adjusting over time.

So take this guide when you next visit your doctor so you can get started on making your own MBF Diabetes Action Plan together - and enjoying life with Diabetes.

Note: MBF does not pay any benefits for doctors' and specialists' services provided outside of hospital unless we specify otherwise under your level of cover and we have an agreement with the provider for that treatment.



What is Diabetes?

Diabetes is one of Australia's most common chronic conditions, and our fastest growing, affecting over 7% of us - around 1.2 million people. Every week, some 1,100 new cases are diagnosed. As yet, there is no cure, however we do know how to manage and control many of its effects - which is what the MBF Diabetes Management Program is all about.

With Diabetes, the body cannot use glucose (sugar) in a normal way due to problems with a substance called insulin. Insulin is made in the pancreas and released into the blood. Its purpose is to help convert the glucose provided by the food we eat into a form that can be used by cells to give us energy. It also helps store excess glucose in the liver. If we don't have enough insulin, or our bodies cannot use it properly, glucose builds up in the blood. This can cause damage to blood vessels, especially fine, small ones such as in the eyes, and those in extremities like the feet, and organs such as the kidneys.

There are two main forms of Diabetes

Type 1 Diabetes, also known as insulin dependent Diabetes, occurs when the cells that produce insulin are destroyed or don't work. It usually affects children and young adults and accounts for 10-15% of all Diabetes cases. With this Diabetes, the exact cause is unknown, but it has a strong family link. Sometimes a viral infection triggers the immune system to destroy the insulin-making cells in the pancreas. This is called an autoimmune reaction.

While the cause is not related to lifestyle, a healthy lifestyle is very important in helping to manage Type 1 Diabetes.

Type 2 Diabetes or non-insulin dependent Diabetes, occurs when the cells in the body stop responding to insulin effectively, so we don't metabolise sugars and carbohydrates (which are made of sugars and starches) properly. It accounts for the remaining 85-90% of Diabetes cases. Although most common in people over 50, it is occurring increasingly in younger people, even children. Because Type 2 Diabetes is often associated with obesity, high cholesterol and high blood pressure, which can often be managed by how you live, it is referred to as a 'lifestyle disease'.



Why do I need an MBF Diabetes Action Plan?

Good control of Diabetes minimises the serious complications of this disease. Lack of information, lack of self-management skills, and too few doctor visits may increase the risk of short and long-term complications of Diabetes.

An MBF Diabetes Action Plan can help you control your Diabetes and help prevent complications - and that's why we recommend you should have one.

An MBF Diabetes Action Plan like the one at the back of this guide, developed with your doctor, will help you stay more up-to-date with your checks so your health and lifestyle will benefit.

How is Diabetes managed?

Whatever the type, the aim for anyone living with Diabetes is to keep blood glucose levels as consistently close to the normal or 'non-diabetic' range, as possible. This way, you can reduce the risk of the complications Diabetes may cause. These include heart attacks, stroke, kidney damage, impotence, skin ulcers, limb amputations, blindness and depression.

Along with regular measuring of blood glucose levels, a healthy diet, exercise and, where necessary, medication, form the basis of a Diabetes management plan.

The latest research shows the best ways to help control Diabetes are to:

- see your regular doctor for check-ups so that you can work as partners to manage your Diabetes;
- follow the MBF Diabetes Action Plan that you and your doctor develop together;
- monitor your blood glucose levels diligently to check that you are optimally controlling the problem;
- stick to your medication program; and
- lead a healthy lifestyle including healthy eating and exercise, and have regular checks of your eyes and feet.

Talk to your doctor about all aspects of your Diabetes. This includes any practical problems you may be experiencing, or use of complementary medications and therapies if they interest you. If you don't have a doctor you feel comfortable with, ask friends or family for their recommendations and if you feel you need to, try visiting a few doctors until you find the right one.

Your doctor may suggest that you be referred for specialist advice, or you can ask to see a specialist or seek a second opinion, if you feel the need.



More information to help you with managing your Diabetes

The following information is to let you know more about what's involved in the day-to-day management of Diabetes, what complications it may cause and, most importantly of all, how you can try to lower the risks of those occurring.

Monitoring your blood glucose levels

The recommended way to monitor your blood glucose levels is a combination of self blood glucose monitoring to see how your blood glucose levels are on a short-term (sometimes daily or several times a day) basis and, over the longer term, testing of glycosylated haemoglobin (HbA1c) levels.

Self blood glucose monitoring will depend on what your blood glucose levels usually are, whether you're taking Diabetes medication or insulin, or if you are successfully managing your Diabetes with diet and exercise alone. Your doctor will advise you on the best regime for you.

Testing your blood for HbA1c (pronounced 'haemoglobin A one c') can help determine how well your Diabetes is controlled over a two to three month period. The closer the HbA1c level to normal, the more successful your chance of reducing or preventing complications.

Your doctor should order this test regularly to help determine the success of your Diabetes management and any required changes to your treatment. Because HbA1c provides a picture of the success of the longer-term control of your Diabetes, it does not measure minute-by-minute variations. Therefore you can have a HbA1c level that is close to normal, despite blood glucose levels being up and down during the day.

What should your HbA1c read?

- Under 6.5% is ideal if you are not taking insulin or Diabetes tablets.
- 6.5% to 7% is a good level of control, although people taking insulin need to take care to avoid hypoglycaemia (blood glucose levels are too low).
- 7% to 8% may be acceptable but shows there may be room for improvement.
- Over 8% is high and shows that the Diabetes is not well controlled.

Other regular checks such as blood pressure, weight, feet checks, eye examinations, lipid studies and kidney tests should also be carried out to monitor possible complications.

Looking at your diet, smoking status and exercise levels can also help assess risk. Having these checks can help prevent further problems, especially with the feet and eyes.

Hyperglycaemia

Hyperglycaemia is when blood glucose levels are too high, especially when over 11mmol/L (millimoles per litre) if measured at any time of the day, or 7mmol/L if tested after fasting.

The symptoms of hyperglycaemia include some or all of the following:

- excessive thirst;
- frequent urination;
- fatigue;
- unexplained weight loss;
- vision problems, such as blurring; and/or
- increased susceptibility to infections such as thrush.

Without treatment, hyperglycaemia can lead to serious damage of organs including the kidneys, eyes and nerves. It is also a significant risk factor for coronary artery heart disease and other blood vessel diseases.

High levels of blood glucose may result if:

- you have missed your dose of insulin or Diabetes tablets or have changed your eating pattern;
- you have an illness or infection;
- you are taking medications like cortisone injections or tablets;
- you are under emotional stress;
- you have been inactive;
- your Diabetes medication/insulin needs review; and/or
- your medication dose does not match your diet and your activity, given the level of illness you may have.

If you have hyperglycaemia, test your blood glucose frequently, keep taking your Diabetes medication and try to maintain food and fluid intake. If hyperglycaemia persists, make sure you contact your doctor, as you almost certainly need to change your medication or management program and manage your nutrition and activity accordingly.

Hypoglycaemia

Hypoglycaemia ('hypo') is when blood glucose levels are too low (less than 3.5 mmol/L). It can affect people who are taking tablets or insulin for their Diabetes. Signs include sweating, shaking, headache, blurred vision, faster heartbeat, not being able to think clearly and, eventually, even fainting. If you have any of these symptoms, try to check your blood glucose then and there.

Low levels of blood glucose can be caused by:

- insufficient food or waiting too long between meals or snacks (if taking tablets or insulin);
- exercise without eating adequate carbohydrates;
- adjustment of insulin dose or Diabetes medication; and/or
- alcohol without food or too much alcohol.

It's important to treat hypoglycaemia quickly as it may get worse and lead to fitting and loss of consciousness. Try eating half a dozen jelly beans, or three teaspoons of sugar or honey or drinking half a cup of sugary (not diet) soft drink, followed by a snack of a sandwich or a piece of fruit. Make sure your family and friends know what to do if you have a 'hypo'. They should ring 000 if concerned or if you can't swallow or can't be woken.

Tell your doctor if you have had even a couple of 'hypos' in a week or if you have been unconscious because of a 'hypo'.

Blood pressure and cardiovascular disease

Because people with Diabetes are likely to have problems such as high cholesterol and high blood pressure, they also have a higher risk of heart attack and stroke. In fact, cardiovascular disease accounts for more than 65% of deaths in people with Diabetes, which is now recognised as a major underlying cause of cardiovascular disease in our society.

That's why it's so important to improve your management not only of blood glucose levels, but also your cardiovascular health. To assist with this, there are four targets for optimal heart health recommended by Diabetes Australia and the Royal Australian College of GPs. These are:

- HbA1c level of 7% or lower;
- total cholesterol less than 4 mmol/L;
- not smoking; and
- blood pressure under 130/80.

A healthy lifestyle

Achieving the heart health targets often involves addressing your diet, exercise levels and smoking status.

If you are overweight, see your doctor to help with a sensible weight loss program. Eat low fat, high fibre foods that are low in added sugar and salt. Eat mostly vegetables, fruit, wholegrain breads and cereals - preferably of the low Glycaemic Index (GI) variety. Choose low-fat dairy products and eat only lean meat. Drink plenty of water.

Smoking is harmful for your health and can dramatically worsen the complications of Diabetes. If you have tried to give up and not succeeded, talk to your doctor about your options.

Try to be active every single day - that doesn't necessarily mean going to the gym or running. Just brisk walking for 30 minutes a day can give health benefits. You can even divide this into three lots of ten minutes if that's easier. Garden, ride a bike, play with the children, walk the dog - just get moving. Always remember that some activity is better than none and more is better than a little. You should see your doctor before beginning an exercise program, especially if you are overweight, have health concerns or have not exercised for a period of time.

Take care of your feet

In developed countries, the most common cause of hospitalisation for people with Diabetes is when a foot injury goes unnoticed due to lack of feeling in the feet because of blood vessel damage. This may become infected and severe enough to require hospital treatment and even surgery. You can prevent this by controlling your blood glucose levels and checking the condition of your feet regularly - perhaps every day. Check the tops and bottoms of your feet and in between the toes for any redness, swelling, cuts or pus. If you can't reach or see your feet, use a hand mirror or ask someone else to help. Always report any problems to your doctor immediately and of course, make sure you have your feet checked by your doctor at least every six months.

Complementary therapies

If you want to consider complementary therapies, make sure your decision is based on accurate information and made in conjunction with your doctor. No matter how good a treatment sounds, please be aware that the information available supporting the safety and effectiveness of complementary therapies compared with other Diabetes medications is very limited. What we do know for sure is that, if your blood glucose level is not in the acceptable range, then you should be following the treatment regime prescribed by your doctor as it is essential to keep your blood glucose levels under control, no matter how you feel about taking medicines.





Depression

Depression is reported to be two to three times higher in people with Diabetes than in those without. Learn to actively manage worry, stress and anxiety and try to avoid burn out in your working life. Complementary therapies such as remedial massage, reflexology, acupuncture and the Alexander technique can help control stress for some people. Other herbal and naturopathy therapies might also have benefits but you should check with your doctor before you decide to use them. If depression is an issue for you, please see your doctor for help.

Diabetes medications and taking insulin

Your doctor may recommend certain medication to control your glucose levels, boost your insulin levels or both.

The best thing you can do for your Diabetes is to take your medications as prescribed so that your blood glucose level stays in the target range.

Insulin injections are needed when the body doesn't produce enough insulin to control blood sugar levels, as with Type 1 Diabetes, or for those with Type 2 Diabetes whose glucose levels are not controlled by medications, diet and exercise. Insulin is injected through the skin into the fatty tissue, at least once a day and sometimes as many as four times a day. Insulin can't usually be given orally (as a tablet, for example), as it is digested before it makes its way into the bloodstream. Both oral insulin and a nasal spray are being developed, but are not yet widely available.

There are five different types of insulin, classified according to the length of their action in the body. You may need varying

amounts of both a short and longer acting insulin. Everyone is different and will respond differently to the amount and type of insulin they take.

Starting on insulin can be difficult and frightening at first. Your doctor and Diabetes educator should help you adjust to the new routine. You may find that, even with their help, it takes a while to find exactly the right dose to control your blood glucose levels and suit your particular lifestyle.

Medications, usually in tablet form, used to treat Type 2 Diabetes are known as oral hypoglycaemics (or antihyperglycaemics). In general, they are not suitable for people with Type 1 Diabetes. A number of different types are available, each working in different ways. They may be used on their own, in conjunction with each other, or with insulin.

The medication information outlined below is for general explanatory purposes only and is not medical advice. You should always check with your doctor prior to taking any medication.

The **sulfonylureas** are an older, but very effective, group of antidiabetic agents which work by stimulating the production of insulin by the pancreas. They may also have some effect in improving the sensitivity of the body's tissues to the action of insulin. They include Daonil, Diamicon, Amaryl and Minidiab.

Biguanides (eg Diabex, Diaformin) are moderately effective antidiabetic agents, sometimes prescribed in conjunction with sulfonylureas for obese people with Type 2 Diabetes. Biguanides work by reducing the amount of glucose produced by the liver, increasing the uptake of glucose by muscle and fat cells, and reducing the amount of glucose absorbed by the intestine. This in turn reduces the level of glucose in the bloodstream.

Alpha-glucosidase inhibitors. There is only one type available in Australia: acarbose (brand name Glucobay). Acarbose is sometimes prescribed with biguanides or sulfonylureas. These inhibitors interfere with the function of some of the digestive enzymes that are involved in digesting carbohydrates, slowing carbohydrate digestion in the small intestine and hence absorption of sugar into the bloodstream. This decreases peaking of blood glucose levels, which can cause problems after eating.

Meglitinides (eg NovoNorm) work by stimulating the pancreas to produce a surge of insulin just after eating. They are

sometimes prescribed in addition to Metformin tablets or insulin therapy.

Thiazolidinediones (eg Avandia and Actoc) work by increasing the sensitivity of the body's tissues to the action of insulin, rather than stimulating insulin secretion. This allows glucose to be transported more efficiently.

Useful tips to help you stick to your medication program:

- Ask your doctor and/or pharmacist about the role of each of your medications. Ask for written instructions on when and how to use each one. Even the best medication will only work if you take it correctly.
- Know the side effects of your medication so you understand what is and isn't normal. If you have any concerns about your medications, talk to your doctor or pharmacist.

It is not unusual for oral hypoglycaemics to control Type 2 Diabetes for a number of years, and then stop working effectively. In fact, insulin treatment may be required in one-third of people with Type 2 Diabetes after 10-15 years of successful management using oral hypoglycaemic agents.

Regardless of the type of Diabetes you have, medication is only one part of the overall management picture. Following a healthy eating plan and a regular activity program is just as important for maintaining your long-term good health and wellbeing.

Gestational Diabetes

Gestational Diabetes develops in the mother during pregnancy either because insufficient insulin is produced or, more likely, because for some reason the pregnant body is unable to use insulin correctly. Gestational Diabetes often goes away after the baby is born, however it is associated with a higher risk for Type 2 Diabetes as the mother gets older. The most common effect of uncontrolled Gestational Diabetes on the unborn baby is that the extra glucose from the mother is transferred to the baby, which stores it as fat. Having a very large baby increases the risk of problems with delivery and in the neonatal period.

Well-managed blood glucose levels can lower the risk of these problems. If you have Gestational Diabetes, a dietitian and Diabetes educator, your doctor or obstetrician and/or a specialist in Gestational Diabetes can help.

Implications for families

Research has shown that Diabetes has a hereditary component.

Those with several close family members with Diabetes tend to develop the condition themselves at an earlier age. If Type 2 Diabetes is in your family, adopting a healthy lifestyle can be your best defence to delay the onset of Diabetes or its severity. It's important to know that evidence suggests that obesity and physical inactivity are the most important risk factors, so make addressing these a priority.

Early detection is also important because, especially Type 2 Diabetes, can remain hidden for many years and complications may set in well before the diagnosis is made. That's why it's important to discuss screening family members for Diabetes with your doctor.

If your child has Diabetes:

- tell his or her school. If possible, arrange for medication to be taken in private, boosting independence and self esteem by reducing the need for supervision by teachers and unwanted attention from other children;
- ensure that your child is allowed to eat in the classroom if needs be, and carries something sweet in his or her schoolbag in case of a 'hypo';
- as your child gets older, involve him or her in decisions about choice of Diabetes medication and management;
- linking the taking of Diabetes medication to the child's own goals can help. A child who loves sport will take medication more happily if it helps him or her to play better, for example.



The MBF Diabetes Action Plan

Name Date

Take this Action Plan and Personal Health Record with you when you visit your doctor and ask your doctor to fill in the due dates and actions required. Use them to remind you when to go for your checks.

Checks or reviews by doctor or health professional	Minimum recommended frequency	Dates due (doctor to fill in)
Review medications	Every routine visit	
Blood pressure	Every routine visit	
Weight	Every routine visit	
Blood test for HbA1c	Every 3 to 6 months	
Feet check by doctor or podiatrist	Every 6 months	
Review exercise	Every 6 months	
Review diet	Every 6 months	
Non-smoking status	Every 6 months	
Review glucose monitoring	Every 6 months	
Review general health	Every 6 months	
Review information needs	Every 6 months	
Kidney check [urine check for protein (microalbumin)]	Every 12 months	
Blood test for lipid studies	Every 12 months	
Eye check by eye specialist	Every 12 to 24 months	

Where can I get further information?

For more information and support, contact:

- your local doctor
- Diabetes Australia on 1300 136 588 (local call cost)
- Diabetes Australia at www.diabetesaustralia.com.au
- mbf.com.au



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