

# Glucose Lowering Medicines: Information for *Older People with Diabetes* *and their Family Members*





**Glucose Lowering Medicines:  
Information for *Older People with Diabetes and their  
Family Members***

The first book in a series of three. The titles of the other books are:

**Glucose Lowering Medicines and Older People with Diabetes:  
Information for *Registered and Enrolled Nurses***

and

**Glucose Lowering Medicines and Older People with Diabetes:  
Information for *Personal Care Workers***

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Glucose Lowering Medicines: Information for Older People with Diabetes and their Family Members was designed to help older people with diabetes and their families use glucose lowering medicines safely. The authors and Expert Advisory Groups who developed the glucose lowering medicines information are not responsible for any actual self care undertaken on the basis of Glucose Lowering Medicines: Information for Older People with Diabetes and their Family Members and disclaim liability and responsibility to any person for the consequences of anything done or omitted by any person relying wholly or partially on the whole or part of the content of Glucose Lowering Medicines: Information for Older People with Diabetes and their Family Members.

## **Conflict of interest**

The authors and members of the Expert Advisory Group have no conflict of interest to declare with respect to commercial enterprises, governments and non-government organisations. The Australian Government Department of Health funded the development and implementation of the Glucose Lowering Medicines Information. No fees were paid to the authors or the Expert Advisory Groups in connection with The Glucose Lowering Medicines Information with the exception of Sam Korn who was employed as a Project Manager between January 2014 and June 2015 and Nicole Duggan who was employed as a research assistant throughout the study.

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Ask the nurse, doctor or pharmacist to show you which information is important for you.

## How to use the information in this book

You can read all the information in the book, if you want to.

But you only need to read the information that suits you and your diabetes.

Ask the diabetes educator, doctor or pharmacist to show you which information is important for you.

Mark the places the nurse, doctor or pharmacist shows you so you remember where to look when you go home. For example, use a book mark or 'stick it note.'

If you do not understand the information ask the nurse, doctor or pharmacist to explain it to you.





## Section 1

### How to use the book

#### Who is this information for?

The information in this book was written for people with type 1 or type 2 diabetes who are 'older,' that is, people aged 60 years or older who are taking medicines to manage their blood glucose.

The information is also useful for family members and friends of an older person with diabetes or anyone who helps an older person with diabetes take their medicines.

#### Why do I need the information?

Taking medicines to manage diabetes and for other reasons can be complicated.

The medicines you need can change as you get older.

The information in the book will help you take your glucose lowering medicines safely and get the most benefit from them.

Glucose lowering medicines are used to manage your blood glucose.

The information only refers to glucose lowering medicines. Ask your doctor, diabetes educator or pharmacist for information about other medicines.

Your doctor may need to change the type of glucose lowering medicines or the dose you take as you get older.



The information in this booklet only refers to medicines you take to manage your blood glucose.

**These medicines are called glucose lowering medicines.**

Ask your doctor, diabetes educator or pharmacist for information about other medicines.

## Where do I start?

The best place to start depends on what type of information you are looking for. If you want **general information about glucose lowering medicines**, **Section 2 starting on page 7 is a good place to start.**

If you only need **one topic about glucose lowering medicines**, for example information about generic medicines, **look at the Table of Contents on page 1** to find the page number for the topic you are interested in.

All the **information about the different types of glucose lowering medicines is in Section 3** starting on page 33. The information is arranged by type of glucose lowering medicine. A chemical name is used to describe each type of glucose lowering medicine, for example Metformin is one type of glucose lowering medicine. Insulin is another type.

There is some information about medicine names on page 12 of this book. Each type of medicine can have more than one brand name; we did not include all the brand names of each type of medicine.

There is information about medicine labels on page 15.

## People with diabetes and medicines

### You need to:

- Provide information that will help your doctor prescribe the medicines that suit your needs and stop or change the medicines or doses of medicines that cause problems. For example information about any complementary or alternative medicines or self-prescribed medicines you take, other health issues you have, and whether you have hypoglycaemia could help your doctor choose your medicines and medicine doses.
- Take your medicines. If you have problems taking your medicines or experience side effects, you should discuss the problems with your doctor or diabetes educator.
- Know how your medicines work.
- Check your blood glucose when you are prescribed glucose lowering medicines and share the information with your doctors and diabetes educators.
- Ask questions about your medicines to help you use them safely. Some questions you or your family can ask are shown on page 19.
- Seek advice about your medicine doses from your doctor, diabetes educator or pharmacist when you become unwell especially if you have nausea, vomiting or diarrhoea and your blood glucose is high.
- Ask for a new medicine list each time your medicines change.
- Ask your doctor or diabetes educator to help you develop plans for managing your glucose lowering medicines when you are sick and to manage your hypoglycaemia.

You should have a plan to manage hypoglycaemia.

You should have a plan to manage times when you are sick.

If you do not have these care plans ask your doctor or diabetes educator to help you make a plan.

Glucose-lowering medicines are used with a healthy balanced diet and regular physical activity.



## Section 2

### General information about medicines

#### Introduction

A process called quality use of medicines is part of Australia's medicines policies. Medicines are very important to treat or prevent diseases. They also help you live longer and improve your quality of life. But most medicines have some risks as well as these benefits.

Medicines must be carefully tested before they are approved for use in Australia, which means they are generally safe, but problems sometimes still occur.

Glucose lowering medicines are sometimes called 'diabetes medicines' or 'hypoglycaemic agents.' They are used to keep blood glucose within a range suitable for you. It is important to keep your blood glucose in a safe range to prevent the blood glucose going too low (hypoglycaemia or hypo) or too high (hyperglycaemia). It is also important to prevent or reduce the risk of medicine side effects so you can live a healthy life for as long as possible.

People with type 1 diabetes will be prescribed insulin. People with type 2 diabetes might be prescribed some of the other glucose lowering medicines described in Section 3 of this book. Many people with type 2 diabetes need insulin over time.

Medicines are used with a healthy balanced diet and regular activity suited to your age and health. They are not used instead of a healthy balanced diet and exercise.

Your medicines will work better if you eat a healthy diet and keep active and take your medicines as directed by your doctor.

Many people with type 2 diabetes need insulin over time.



Just because you can get medicines without a prescription does not mean they will suit your needs or are safe for you.

## Taking many medicines (polypharmacy)

Older people with diabetes often take two or more glucose lowering medicines. In addition, they often take medicines for heart disease, blood pressure, to manage blood fats and for other conditions such as arthritis.

Some older people also use medicines they can buy without a prescription (self-prescribed medicines) and complementary medicines to treat common conditions such as colds and 'flu.'

Generally, older people with diabetes take an average of seven medicines each day. Some medicines need to be taken several times a day.

The more medicines you take the easier it is to forget to take a medicine or make mistakes when you take your medicines. It also means there is more chance the medicines may not work well together (interact with each other), which could cause problems.

Making mistakes with medicines can be dangerous. If you make a mistake with your medicines you are more likely to need to visit the emergency department or go into hospital.



## Problems people have when taking their medicines

Common problems people have when taking their medicines are:

- Not taking the medicines the way they should be taken because the person does not understand how to take them or forgets the right way to take the medicine.
- Sometimes people get confused when they take a lot of medicines.
- Taking too much medicine or the wrong medicine dose.
- Taking a dose that is too low.
- Missing medicine doses.
- Taking the wrong medicine or taking it at the wrong time.
- Taking somebody else's medicines.
- Taking out-of-date medicines.

You should not take medicines prescribed for other people or store your medicines with other people's medicines.



Tell your doctor or diabetes educator about all the medicines you take including medicines you can buy without a prescription and complementary medicines, vitamins and minerals so they can be included on your medicine list.

This information is important to make sure your medicines work together and do not make your blood glucose go too low or too high or cause other problems.

## Main types of medicines

There are four main types of medicines:

- Prescription medicines that you can only get from a pharmacy with a prescription from a doctor or a nurse practitioner. Glucose lowering medicines are prescription medicines.
- Medicines you can buy without a prescription from pharmacies, supermarkets and other shops for example, pain relief like Panadol. These are called 'non-prescription medicines' or 'over-the-counter medicines.'
- Medicines you can only get from a pharmacist. These are called 'pharmacist only' medicines because you have to ask a pharmacist for them and they are not available in supermarkets and other shops. Asthma inhalers are an example of 'pharmacist only' medicine.
- Complementary medicines such as herbal medicines and vitamin and mineral supplements, are available from pharmacies, supermarkets and a range of other places. Usually you do not need a prescription to buy complementary medicines.

## Buying medicines on the Internet

You can buy many medicines on the Internet but that is not a good idea. Many Internet sites give incorrect or misleading information that can lead to problems. Medicines made in other countries might not be manufactured to Australian standards. Importantly, the medicines might not suit your individual needs or be safe for you.



## Some other medicines can affect your blood glucose

### Prescription medicines

Some medicines can make the blood glucose go too high. These medicines include corticosteroids (steroids). Steroids are used to treat problems such as asthma, other lung problems and arthritis. Some 'fluid tablets' (diuretics) can also make the blood glucose go high.

Some medicines can make the blood glucose go too low, for example some medicines used to treat high blood pressure.

It is important to ask your doctor if your prescription medicines will affect your blood glucose levels.

### Non-prescription medicines

Some medicines contain ingredients that can increase your blood glucose. For example some decongestant medicines used to treat sinusitis, colds and 'flu.' These medicines can also cause symptoms similar to low blood glucose such as trembling and fast heart rate. It is important to check whether non-prescription medicines could affect your blood glucose levels or interact with your other medicines, before you buy them.

It is important that you do not stop any of your medicines. Discuss any problems you have with your diabetes educator or doctor.

### Complementary medicines

Some herbal medicines can also affect blood glucose and are discussed on page 28. You should also check with your doctor or pharmacist whether herbal medicines could interact with your other medicines before you use them. You might need to stop some herbal medicines before you have an operation or investigations. Ask your doctor about how to manage your herbal medicines if you need surgery.

Some medicines can make diabetes complications, such as kidney damage, worse and might not be suitable for older people with diabetes.

Keep an up-to-date list of **all** your medicines.

Include herbal and vitamins and minerals on your medicine list.

## Medicine names

It is important to know the names of your medicines.

Medicines usually have two names: a brand name, which is also known as the trade name, and a chemical name.

The chemical name is the name of the ingredient in the medicine that makes it work. It is called the active ingredient.

Some medicines have more than one active ingredient for example Janumet which contains Januvia and Metformin.

The brand name is the name the manufacturer gives the medicine. Often several manufacturers make their own version of the medicine so there can be many brand name medicines but they have the same chemical name.

For example:

Metformin is the chemical name.

Brand names for Metformin are Diabex and Diaformin.

Generally brand name medicines all work in a similar way but some brand name medicines have individual variations such as how long it takes for the medicine to begin to act after you take it, how long it works for, and what it looks like.



## Generic medicines

Generic medicines are widely used in Australia.

A generic medicine contains the same active ingredient as the original brand name medicine and works the same way.

Generic medicines are generally cheaper than brand name medicines.

Generic medicines always contain the same amount and type of active ingredient as the original brand, but sometimes they can contain different fillers and colours, see page 14.

Generic medicines must meet the same strict standards of quality and safety as any other medicine. This means they work as well as brand name medicines and are safe.

Sometimes it is not a good idea for a person to switch to a generic medicine. It can be confusing when your medicines look different from usual and could lead to mistakes with your medicines.

Check your blood glucose regularly when you start a generic glucose lowering medicine to help reassure you that the medicine is working.

Your pharmacist might offer you a generic medicine when you have a prescription filled.

You do not have to have the generic medicine.

You can choose to have a brand name medicine but it will usually cost more than a generic medicine.



If you break, crush or chew tablets that have a coating they will not work as well.

If you have trouble swallowing tablets ask your doctor or pharmacist whether there is a different type of medicine that works the same way or another way to take the medicine.

## Other ingredients in medicines

Medicines contain some other ingredients as well as the active ingredient. These other ingredients have an important role. Some common ingredients in medicines are:

**Binders** hold ingredients in the medicine together in capsules or tablets. Binders are often sugars such as lactose, sucrose, and sorbitol, but they generally do not affect blood glucose.

**Coatings** are added to the outside of large tablets that are hard to swallow to make them easier to take. Some coatings also make the medicine taste better. Coatings also prevent the tablet from being damaged by water and moisture. Some coatings also stop the medicine from breaking down until it reaches a specific organ in the body, for example the stomach.

**Fillers and diluting agents** add bulk to medicines to make very small active chemicals easy to take.

**Preservatives** are used to stop the medicine deteriorating too quickly so it has a longer use-by date.

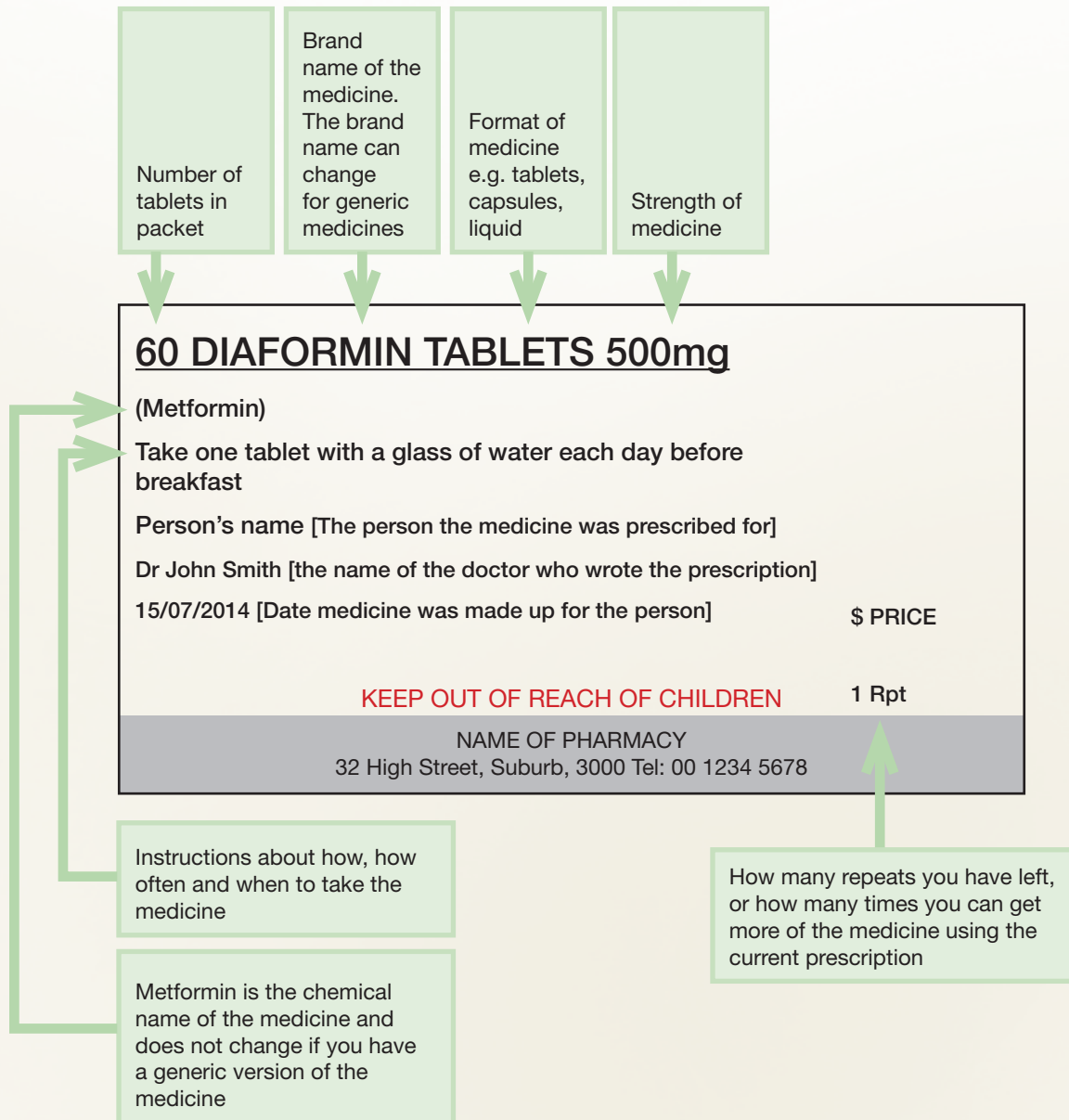
**Colours** are commonly added to medicines to make them easier to identify, which can be helpful to people who take a lot of medicines.

## Glucose lowering medicines

Glucose lowering medicines work in various ways to lower blood glucose. The actions of the main types of glucose lowering medicines used in Australia are described in Section 3.



Information you will find on the label of prescription medicines. Each coloured box explains what the writing on the medicine label means.



## My medicine list

Your pharmacist, doctor or nurse practitioner will usually give you a list of your medicines when they give you your prescription.

It is important that you take your list with you when you visit your health professionals and when you need to go to the emergency department or hospital.

It is important to make sure all the medicines you are taking are on your list, including any medicines you use without a prescription and complementary medicines. Medicine information is often in a table like the table on the opposite page.

Medicine lists can help you and your family members learn about your medicines.

Ask for a new medicine list every time your medicines or medicine doses change.

If you start a medicine yourself or start a complementary medicine tell your doctor or diabetes educator and make sure these medicines are included on your medicine list.



**Table 1: *Example* of a medicine list you could use to keep a record of all the medicines you take. You should include any herbal medicines, vitamins and minerals you are taking. The information about Metformin in the second row of the table is an *example* of how medicines are listed.**

Chemical name	Brand name	Dose	When to take	What the medicine is for
Metformin	Diaformin	500 mg every day	Take one 500 mg tablet with a glass of water each day before breakfast	To manage blood glucose
Allergies: Write any allergies or sensitivities you have to any medicines in this space.				

Ask for a new list of medicines when you start a new medicine, when you stop a medicine or your medicine doses change.

## Important questions you or your family member can ask to help you use your medicines safely

It is important you have all the information you need to get the most benefit from your medicines and to take your medicines safely.

The list on the next page shows some questions you should ask your doctor, diabetes educator or pharmacist about your medicines.

The list can help you make sure you have the information you need to take your medicines safely. You can also find other sources of information about medicines in Section 4 on page 56.

It is easy to forget the things you were told after you go home from an appointment with a health professional or hospital so make sure you also get written information from the health professionals you see in a language and format you can understand and that the information is what you need.





## Questions you should ask about your glucose lowering medicine

- What is the chemical name and brand name of my medicine?
- What does the medicine do?
- How long will it take for the medicine to start to work?
- Do I need to keep taking it?

## Questions you should ask about taking the medicine

- When should I start the medicine?
- How much should I take for each dose?
- How many doses of the medicine should I take each day?
- Are there any times when I should change the dose of my medicine?
- Should I avoid eating any foods or taking any other medicines at the same time?
- Is it safe to drink alcohol while I am taking the medicine?
- What should I do if ...
  - I forget to take the medicine?
  - I am sick and cannot take the medicine?
  - My blood glucose goes too low?
  - My blood glucose goes too high?

## Questions you should ask about side effects of the medicine

- What are the side effects of the medicine?
- How will I know if I am having a side effect?
- What should I do if I have a side effect?

## Other questions you could ask

- How should I store my medicine?
- Is there anything else I need to know?
- Will the medicine affect my driving?
- Is there any equipment I need to take my medicine?

Regularly checking your blood glucose can help you see changes in your blood glucose when new medicines are started or when medicine doses change.

Know your risk of having a medicine side effect or adverse event. Read pages 24, 25, 26 and 27.

## Am I at risk of having a medicine problem or side effect?

Many older people with diabetes want to know whether they will have problems when they take glucose lowering medicines.

### **Hypoglycaemia is the most important side effect of some glucose lowering medicines.**

Forms like those on pages 24, 25, 26 and 27 will help you work out your personal risk of having hypoglycaemia or a glucose lowering medicine problem. You can ask your doctor, diabetes educator or pharmacist to help you fill in the forms to work out your risk.

Once you work out your risk of having a medicine side effect you can plan ways to reduce the risk and what to do if a problem does occur.

A medicines review by a pharmacist can be very helpful especially if it is undertaken in your home. These are called Home Medicines Reviews. A Home Medicines Review can be organised by your doctor.

Reducing the risk of problems might involve making sure you still need all the medicines you are taking.

It is important to:

- Wear your reading glasses when you take your medicines.
- Get help to take your medicines if you cannot manage by yourself. Devices and people are often available to help you use your medicines.
- If possible see the same doctor or medical clinic each time you visit.
- Get your medicines from the same pharmacy every time if possible.
- Ask the doctor to give you a new medicines list if you start a new medicine or have a medicine side effect.

## Who is most likely to have problems with their medicine?

People are more likely to have problems if they:

- Use five or more medicines.
- Have problems managing their medicines because of arthritis, vision problems or forgetfulness.
- Were discharged from hospital in the past four weeks.
- Become unwell or confused, fall or are in pain.
- Take certain types of medicines such as warfarin and other blood thinners, digoxin and glucose lowering medicines.

If you have difficulty paying for your medicines, talk with your diabetes educator, doctor or pharmacist.







## Hypoglycaemia

Hypoglycaemia (hypo) means the blood glucose is too low. Too low usually means a blood glucose level less than 4 mmol/L when you check your blood glucose.

It is best to keep the blood glucose above 6 mmol/L for people living in residential aged care because they often do not have the usual symptoms of hypoglycaemia.

Ask your doctor and/or diabetes educator to help you work out your risk of having hypoglycaemia and to work out a blood glucose level that will help protect you from hypoglycaemia.

When the blood glucose goes low it usually causes symptoms such as sweating, trembling and rapid heartbeat that warn you that your blood glucose is too low and you need to eat some glucose.

However, other things can also cause these symptoms so it is important to check your blood glucose.

Another important thing to know is that the symptoms of hypoglycaemia change over time and older people might not feel their usual symptoms. They might feel weak, tired and confused. Thus, it is important to 'listen to your body' and **learn to recognise *your* signs of low blood glucose**.

It is also important to try to keep your blood glucose in a safe range for you. For many older people that is between 6 and 12–15 mmol/L.

If you do not recognise hypoglycaemia it is important to:

- Check your blood glucose regularly.
- Wear a 'Medic Alert' device.
- Keep the telephone numbers of the people you will call for help with you at all times.

Some sources of information about hypoglycaemia are listed in section 4. Use the form on page 24 to decide your hypoglycaemia risk then discuss your risk with your doctor or diabetes educator. A family member, your doctor or diabetes educator can help you fill in the forms on pages 24, 25, 26 and 27.

Always have glucose such as jelly beans or lucozade with you to treat a hypo.

Do not drive if your blood glucose is below 5 mmol/L (above 5 to drive).

Wear a medic alert if you are at risk of having a hypo.

## Hypoglycaemia (hypo) risk assessment tool

### How to use the form:

- Each box represents a risk of having a hypo.
- Place a cross (X) in each box that applies to you or ask a family member to help you.
- The more boxes you cross the greater your risk of having a hypo, but even one risk means you could have a hypo.

☐ Can you tell when you are having a hypo? If you **cannot tell**, put a cross in the box.

☐ Have you had a hypo recently?

Do you:

☐ Take insulin (see page 48).

☐ Take a sulphonylurea such as Gliclazide, Glimepiride, Glipizide (see page 37).

☐ Take insulin and a sulphonylurea.

☐ Have kidney problems?

☐ Have liver damage?

☐ Have trouble remembering things?

☐ Eat meals with very little carbohydrate e.g. bread, cereals, vegetables?

☐ Not eat regular meals?

☐ Have difficulty swallowing?

☐ Have stomach problems such as coeliac disease or irritable bowel syndrome?

☐ Feel you are losing weight?

☐ Often have diarrhoea or vomiting?

☐ Take medicines to help you sleep?

☐ Take any complementary medicines, especially to control blood glucose?

☐ Drink alcohol.

☐ Were admitted to hospital for hypoglycaemia.

**My Risk Score:** \_\_\_\_\_

## What to do to manage your hypoglycaemia risk

Discuss your hypo risk with your health professionals who can help you plan to reduce the risk by deciding on a safe blood glucose range: between 4 and 10 mmol/L for healthy older people living in the community; between 6 and 15 mmol/L is safer for frail older people and older people at high risk of having a hypo.

Ask your doctor, diabetes educator or a family member to help you:

- Decide on a blood glucose monitoring plan that matches the times your glucose lowering medicines are working at their peak.
- Identify when low blood glucose levels are most likely to occur, for example during activity, such as gardening.
- Plan to take your glucose lowering medicines, especially insulin, with meals.
- Plan what to do if you need to go without food for a procedure such as a blood test or surgery.
- Check if any of your other medicines can affect your blood glucose.

Ask your doctor or pharmacist to undertake a Medicines Review if:

- you have kidney or liver problems.
- you have hypos frequently.
- you eat less than usual and/or you do more activity than usual.

Work out your hypoglycaemia risk when you have a hypo and as part of the annual diabetes health check.

Wear a 'Medic Alert' and keep the telephone numbers of the people you will call for help with you at all times.

## Risk of having problems with glucose lowering medicines

### How to use the form:

- Each box represents a risk of a medicine problem.
- Place a cross (X) in the box if the information applies to you or ask a family member to help you.
- The more boxes you cross the greater your risk of a medicine problem, but even one risk means you could have a problem.

- ☐ Blood glucose is often low, for example less than 4mmol/L.
- ☐ Take a sulphonylurea such as Gliclazide, Glimepiride, Glipizide (see page 37).
- ☐ Take insulin (see page 48).
- ☐ Take both a sulphonylurea and insulin.
- ☐ Are underweight or losing weight. Losing weight can often affect your glucose stores.
- ☐ Do not feel the symptoms of low blood glucose, hypoglycaemia.
- ☐ Have difficulty remembering things.
- ☐ Have high blood pressure.
- ☐ Take five or more medicines.
- ☐ Take more than 12 medicine doses per day.
- ☐ Do not check your blood glucose very often.
- ☐ Blood glucose is mostly high, more than 15 mmol/L.
- ☐ Use complementary medicines as well as prescription medicines. Complementary medicines such as fish oils, St John's Wort, and some cranberry preparations can react with aspirin or warfarin and cause bleeding.
- ☐ Take warfarin or other blood thinners or digoxin.
- ☐ Have kidney problems.
- ☐ Have liver problems.
- ☐ Have heart disease.
- ☐ Have allergies or sensitivities.
- ☐ Have been in hospital recently.
- ☐ If you drink alcohol.

**My Risk Score:** \_\_\_\_\_



## What to do to manage your risk of having problems with your glucose lowering medicines

- Discuss your risk score with your health professionals so they can help you develop a care plan to reduce your risk of problems occurring.
- Monitor your blood glucose and note common times when the blood glucose goes too high or too low.
  - Have a plan to reduce risk of hypo (low blood glucose).
  - Have a plan to manage days when you are sick and don't feel like eating.
- Make sure your doctor checks your kidney and liver function regularly. This usually means a blood test.
- Ask your doctor or pharmacist to check your medicine list at least once per year and when you start a new medicine.
- Ask for a new list when you start a new medicine or stop a medicine.
- If you take herbal medicines make sure they are on your medicines list.
- Ask your doctor, diabetes educator or pharmacist whether any of the other medicines could make your blood glucose go low. Some herbal medicines can lower blood glucose.
- Seek advice if you notice any of the side effects described for individual glucose lowering medicines in section 3 for the glucose lowering medicines you take.
- Ask for help to take your medicines if you worry about making mistakes or you are taking a lot of medicines.
- Wear a 'Medic Alert' and keep the telephone numbers of the people you will call for help with you at all times.

It is important to discuss complementary medicines with your doctor, pharmacist or diabetes educator before you commence a complementary medicine to reduce the risk of problems.

Tell your doctor, diabetes educator and pharmacist you use a complementary medicine and include it on your medicines list.

## Complementary medicines

Many people with diabetes use complementary and alternative therapies, which includes a range of therapies besides herbal medicines. Some therapies such as meditation, acupuncture and psychological therapies can be very helpful. However, it is important that you know that not all complementary medicines and therapies have been rigorously tested, especially in older people.

If you decide to use a complementary medicine you need to know how it works, what the side effects are and how it could interact with your other medicines.

It is important to consult a reputable complementary medicines practitioner rather than self-prescribing.

Some people use complementary medicines to improve their health and well-being, some people use them to treat pain and some people use them to help manage their blood glucose. If you use glucose lowering complementary medicines with prescription glucose lowering medicines you could be at risk of hypoglycaemia and other problems.

Commonly used glucose lowering complementary medicines are Fenugreek, Ginseng, bitter melon and some forms of cinnamon. These complementary medicines can interact with your glucose lowering medicines and cause hypoglycaemia.



## Using dose administration aids safely

Many older people use dose administration aids such as boxes with compartments or blister packs. Dose administration aids can help some people remember to take their medicines. However, dose administration aids are not suitable for all older people and should only be used if they are needed.

It is important to try other methods before you start using a dose aid. Some methods you could try are listed below, but it is important to check how helpful a dose administration aid will be for you, before you start using one.

- Ask your doctor to reduce the number of medicines you need to take.
- Use dose reminder alerts on your phone or a daily calendar or take your medicines with regular activities such as cleaning your teeth.
- Several medicine dose administration aids are available. They include:
  - Boxes with compartments for the medicines e.g. dosette boxes, which are refillable. You can pack them yourself or ask your family for help. Dosette boxes and blister packs are particularly useful for people living in the community.
  - Blister or bubble packs, which are similar to dosettes but the packs are disposable once all the medicines are taken. They are packed by the pharmacist.
  - Sachets in which the medicine is packed and the sachet is rolled up. They are packed by the pharmacist.
  - Automated medicine dispensers.

If you need a dose administration aid, choose one that you can use easily and check your medicines before you take each dose.



It is best to keep your medicines in the original container unless they are packed in a dose aid by a pharmacist.

Medicines can become less effective if they are not stored properly.

## Storing medicines

All medicines, including complementary medicines, should be stored in their original package or container in a locked cupboard out of reach of children and confused older people. Different tablets should not be mixed together in the same container because it makes it difficult to know you are taking the right medicine or to find out which medicine causes the problem if you have a side effect.

Heat, light and moisture can affect the active ingredient in the medicine. If that happens the medicine might not work the way it should. This means bathroom cupboards and cupboards over the stove might not be appropriate places to store medicines.

Some medicines such as insulin need to be kept in the refrigerator but should not be frozen. Medicine cold packs can be used to keep medicines cool when travelling. They are available from Diabetes Australia and pharmacies.

Make sure your medicines are labelled correctly, especially if they are stored in the same place as other family members' medicines. Do not store your pet's medicine in the same place as you store your medicines.

## Use-by date

Check your medicines are not past their use-by date. Medicines past their use-by date still work but might not be as effective.



## Disposing of unused medicines

Medicines you no longer need or do not use and medicines that are past their use-by date must be disposed of safely so the chemicals in the medicine do not damage the environment, which can happen if the medicines are flushed down the toilet or put into the garbage.

Remove your name and identifying information from the medicine container if the medicine has expired or you no longer need the medicine. Check whether your pharmacy will dispose of the medicines for you, or can advise you where to take the medicines. Then take them to the pharmacy for disposal.

## Disposing of used insulin needles and lancets

Needles and lancets are called 'sharps' and should be placed in sharps containers so other people do not prick themselves with a used needle or lancet.

Sharps containers can be obtained from your local council and from Diabetes Australia, your local hospital or diabetes educator.





## Section 3

### Information about main types of diabetes medicines

Do not be worried about the big words for the name of each type of glucose lowering medicine in the following list and described on the following pages.

#### The main types of diabetes medicines

The main types of glucose lowering medicines (diabetes medicines) are:

- Biguanides: Metformin is the only biguanide available in Australia.
- Sulphonylurea, sometimes spelt sulfonylurea.
- Alpha-glucosidase inhibitors.
- Thiazolidinediones, which are also known as TZDs or Glitazones.
- Incretin hormones, there are two types
  - Glucagon-like peptide-1 or GLP-1 agonists.
  - DPP-4 inhibitors.
- Sodium Glucose Co-transporter-2, also known as SGLT-2.
- Combination medicines contain more than one type of glucose lowering medicine.
- Insulin.

You might need help to read and understand the information in the Consumer Medicines Information leaflets, often called CMI.

CMI should come with your prescription medicines.

CMI are much more detailed and use bigger words than the information in this booklet. You can ask for a CMI when your pharmacist fills your prescription.

Note:

People with type 1 diabetes need insulin. People with type 2 diabetes often start on glucose lowering tablets but need insulin over time.

Do not crush your glucose lowering medicines unless your doctor, diabetes educator or pharmacist says it is safe.

Glucose lowering medicines lower HbA1c by 0.5%–2% depending on the individual and the glucose lowering medicines.



## Metformin

Pronounced Met-FOR-min

Chemical name	Some common brand names
Metformin	Diabex Diaformin

Metformin comes either as a tablet or a liquid form, but most people take tablets. The liquid form is sometimes used for older people who have difficulty swallowing. It is more expensive than tablets.

### What does Metformin do?

Metformin stops the liver making too much glucose. The liver releases glucose into the blood between meals; but if there is not enough insulin in the blood the glucose cannot get out of the blood into the tissues, where it is used for energy.

Metformin also stops the body absorbing some glucose from the gut.

It also helps insulin move glucose out of the blood stream into muscle and fat cells.

It helps improve cholesterol levels and has a mild effect reducing the appetite.

Emerging research suggests Metformin is protective against some cardiovascular and oncology conditions and neurodegenerative diseases including Alzheimer's and Parkinson's Disease.

### When to take

Metformin should be taken with or immediately after food.



## Metformin

### Main side effects of Metformin

Metformin might not be safe for older people with serious kidney problems, liver problems or people who drink alcohol.

The most common side effects of Metformin are nausea, diarrhoea, bloating and upset stomach. These problems usually occur when you first start Metformin but often go away in time. These side effects are less likely to occur if you start on a low dose and gradually increase the dose to suit your needs.

Metformin does not usually cause hypoglycaemia but you are at risk of hypoglycaemia if you also take other glucose lowering medicines such as a sulphonylurea or insulin with your Metformin.

Using Metformin for a long time might reduce absorption of vitamin B<sub>12</sub> from your gut, which can put you at risk of anaemia, especially if you have kidney disease.

Lactic acidosis is a very rare but serious side effect. It is more likely to occur if you have serious kidney problems, become seriously ill or have heart failure, breathing problems or drink excess alcohol.

Usually the doctor checks whether you have any of these problems before prescribing Metformin, but you should mention these problems to your doctor, diabetes educator or pharmacist.

You might not have these problems when Metformin is prescribed but they might develop over time.

Ask your doctor to check your vitamin B<sub>12</sub> levels if you are taking Metformin.

When taking Metformin you should call your doctor or diabetes educator if you notice any of the following signs. They could be signs of lactic acidosis but they are usually side effects of other medicines or signs of other problems:

- feel very weak and tired.
- have nausea and vomiting.
- feel very cold.
- have trouble breathing.
- have muscle problems.
- have an upset stomach.
- have the feeling of rapid and/or irregular heartbeats.

You may need to stop your Metformin for a short time if you have severe vomiting and/or diarrhoea or cannot keep fluids down.

You might also need to stop Metformin if you need to have special X-rays where dye is injected into a vein or you need an operation.

If you do need to stop your Metformin, make sure your doctor tells you when to start Metformin again.

## Sulphonylurea

Pronounced Sul-foh-nile-yoo-ree-uh.  
It is sometimes spelt Sulfonylurea

There are several different types of sulphonylureas.

Chemical name	Common brand names
Gliclazide	Gliclazide MR Diamicron
Glipizide	Melizide Minidiab
Glimerpiride	Amaryl Diapride

### What do Sulphonylureas do?

Sulphonylureas help your body release insulin from the beta cells in the pancreas. The pancreas is the organ that produces insulin. Insulin lowers blood glucose because it allows glucose to move out of the blood stream into the cells where it can be used for energy.

It is important to know that when you have diabetes for a long time your body might not be able to make enough insulin to keep your blood glucose in the normal range even when you eat a healthy diet, exercise and take your glucose lowering medicines. Producing less insulin is a normal part of ageing. When you produce less insulin, Sulphonylurea medicines will no longer be effective and insulin injections will be needed to replace your own insulin.

## Sulphonylurea

Sulphonylureas are often prescribed with Metformin and other glucose lowering medicines.

### When to take

Sulphonylureas should be taken with meals to reduce the risk of hypoglycaemia.

### Main side effects

- Hypoglycaemia is the most important side effect of sulphonylureas. You are more likely to have hypoglycaemia if your meal is delayed after you take your sulphonylurea, you do not eat enough food, or you do extra activity such as gardening and playing golf. See pages 24–25.
- People who have serious kidney or liver disease are more likely to have hypoglycaemia because the medicine is broken down in the liver and eliminated from the body through the kidneys. If these organs are damaged more sulphonylurea stays in the blood and works for a longer time.
- Some people develop skin rashes, gain weight and sometimes have stomach upsets.
- You might not be able to take sulphonylureas if you are allergic to sulphur medicines.



# Alpha-glucosidase inhibitors

Pronounced Alfa-gluco-side-ase in-hib-it-or  
Acarbose

## Alpha-glucosidase inhibitors

The chemical name of the most commonly used Alpha-glucosidase inhibitor is acarbose.

Chemical name	Common brand names
Acarbose	Glucobay

## What Alpha-glucosidase inhibitors do

Alpha-glucosidase inhibitors slow the absorption of glucose from the intestine so the glucose takes longer to enter the blood stream.

## When to take

Acarbose should be taken whole before a meal.

Acarbose should not be crushed.

## Main side effects

- Abdominal bloating and wind.
- Diarrhoea.





## Thiazolidinediones

Pronounced THY-uh-ZOHL-ih-deen-Di-own

### Thiazolidinediones (TZD)

Thiazolidinediones are often called TZDs or Glitazones because their chemical name is hard to pronounce, even for health professionals!

There are two main types of TZDs:

Chemical name	Common brand names
Pioglitazone	Actos
Rosiglitazone	Avandia

TZDs can be used with other glucose lowering medicines.

Pioglitazone is used more often than Rosiglitazone.

### What do TZDs do?

Make the cells in the liver, muscle and fat more sensitive to insulin so it is easier for glucose to move out of the blood and into the cells where it is used for energy.

Stop the liver putting too much glucose into the blood, which can make the blood glucose go too high.

Raise the level of good fat in the blood called HDL.

Lower blood pressure.

Lower the amount of fat stored in the liver, which helps the liver function more efficiently.

## Thiazolidinediones

It sometimes takes several days before you begin to notice any effects when you first start taking TZDs. Most people start on a low dose and gradually increase the dose to suit their needs.

TZDs can be used with Metformin and sulphonylureas.

### When to take

TZDs should be taken with a glass of water with or after a meal.

### Main side effects

- People often put on weight when taking TZDs because TZDs cause fluid to accumulate in the abdomen and legs and can cause shortness of breath or make existing breathing problems worse.
- TZDs can cause heart failure or make heart failure worse if you already have it. They should not be used by people who have heart disease.
- Rosiglitazone has been associated with heart attacks but the risk is small. A heart attack is more likely if people already have heart disease. The doctor will consider the person's risk of having a heart attack and discuss the risk with the individual before prescribing Rosiglitazone.
- TZDs might make macular oedema worse. Macular oedema is a common eye problem in older people that causes problems with vision.

It is very important to have regular eye checks if you have diabetes and when taking TZDs.

## Thiazolidinediones

There is also a small risk that TZDs increase the risk of fractures (broken bones) in the arms and lower legs in women. This might be a problem for older women, especially if they are at risk of falls or have osteoporosis (brittle bones).

Some studies suggest pioglitazone increases the risk of bladder cancer, but the risk is very small. Bladder cancer is more likely in people with a personal or family history of bladder cancer.

If you are taking a TZD seek help from your doctor or diabetes educator if you:

- Notice swelling in your ankles, legs or around your abdomen.
- Gain a lot of weight in a short time.
- Have trouble breathing.
- Develop a cough.
- Feel very tired.

These are signs fluid is accumulating in the tissues.

# The incretin hormones

Pronounced In-cree-tin

## The incretin hormones

There are two main types of incretin hormones:

- Glucagon-like peptide, which are usually called GLP-1 agonists. Agonists stimulate action.

GLP-1 agonists	
Chemical name	Common brand names
Exenatide	Byetta Bydureon Victoza

- Dipeptidyl peptidase-4 inhibitors, which are usually called DPP-4 inhibitors. Inhibitors slow down action.

DPP-4 inhibitors	
Chemical name	Common brand names
Sitagliptin	Januvia
Saxagliptin	Onglyza
Linagliptin	Trajenta

If you are prescribed a GLP-1 make sure you know how to take it.

## The incretin hormones

### What incretins do

#### GLP-1

GLP-1 slows the rate at which food leaves the stomach so glucose takes longer to enter the blood, which means the blood glucose does not rise too high after meals. GLP-1 reduces the secretion of glucagon from the liver. Glucagon is a hormone that helps increase blood glucose when it goes too low.

GLP-1 also reduces appetite and might help some people lose weight. But losing weight is not appropriate for many older people.

GLP-1 might not be as effective for people who have had inadequate diabetes control (mostly high blood glucose) for over 10 years.

GLP-1 medicines are given by injection.

One GLP-1 medicine, Victoza, is injected once a day and another GLP-1, Bydureon, is injected once a week.

#### DPP-4

DPP-4 inhibitors reduce the action of a hormone secreted in the intestine called DPP-4, which reduces the secretion of GLP-1, which means there is more GLP-1 in the blood after a meal. The incretins work with insulin to manage blood glucose.



## The incretin hormones

### When to take

GLP-1 medicines are injected up to one hour before a main meal and doses should be taken at least six hours apart.

Victoza is injected once a day.

Bydureon is injected once a week.

DPP-4 inhibitors are taken by mouth with or without food.

### Main side effects

- The Incretins have only been on the market for a few years so the long term effects are not known.
- They can cause digestive problems such as indigestion, bloating, wind, nausea, vomiting, diarrhoea, constipation and abdominal pain when the medicine is first started. However, these symptoms usually resolve over time.
- They can cause respiratory infections.
- People who have kidney or liver disease might not be able to take Incretin medicines.
- People who have a history of pancreatitis should not use Incretin medicines.
- The Incretins are not used for people with type 1 diabetes.
- Hypoglycaemia can occur if Incretin medicines are used with some Sulphonylurea medicines, so the Sulphonylurea might need to be stopped or the dose might need to be reduced. Checking your blood glucose will help you tell if your blood glucose goes too low.

## Sodium-glucose cotransporter-2 inhibitors

Pronounced: So-de-um-glucose co-transporter-2 inhibitors

Sodium-glucose cotransporter-2 inhibitors (SGLT-2)

These medicines are often called SGLT-2 because it is easier to pronounce.

Chemical name	Common brand names
Dapagliflozin	Forxiga

### What SGLT-2 medicines do

SGLT-2 medicines are a new group of medicines that have only been used for a few years. They help the kidneys excrete glucose in the urine, which means there is less glucose in the blood.

### When to take

SGLT-2 medicines should not be crushed. They should be taken before the first meal of the day.

### Main side effects

- SGLT-2 medicines have only been available for a short time and therefore it is not known whether they will cause problems in the long term.
- They can cause infections in the urinary tract.
- They can also cause fungal infections in the genital area.
- Some people produce a lot of urine when they take SGLT-2 medicines, which can make urinary incontinence worse and might contribute to dehydration, especially when the blood glucose is high and in hot weather.
- Some SGLT-2 medicines can cause a serious problem called ketoacidosis in people with type 2 diabetes. Ketoacidosis can be present even when the blood glucose is not very high.

## Combination medicines

### Combination medicines

Combination medicines contain two or more medicines in the same tablet or capsule.

Some glucose lowering medicines for type 2 diabetes are available in combination form, for example:

Medicine name	Contains combination of
Glucovance	Glyburide and Metformin
Janumet XS	Sitagliptin and Metformin
Kombiglyze	Saxagliptin and Metformin

Combination medicines must not be crushed.

Combination medicines can help reduce the number of tablets you need to take and can make it easier to manage your medicines.

It is also more difficult to adjust the dose of the individual medicines in the combination.

### Main side effects

- Side effects of combination medicines are those described in the section about each of the medicines in the combination.
- If you do have a side effect while taking combination medicines it can be more difficult to decide which medicine caused the problem.

Do not crush combination medicines.

Combination medicines are usually not used for older people who have not used the active ingredients in the medicines before.

# Insulin

Pronounced: In-su-lin

## Insulin

Insulin is a hormone that lowers blood glucose.

People who have type 1 diabetes need insulin from the time they are diagnosed with diabetes because they cannot make insulin in their body.

Many people with type 2 diabetes will need insulin as they get older and have diabetes for a long time.

Sometimes people with type 2 diabetes will be prescribed another glucose lowering medicine as well as insulin.

Often two types of insulin are used.

Some insulins come in premixed formulas. Premixed insulins contain two different types of insulin in the same insulin bottle: thus they are a type of combination medicine.

Insulin is used to keep blood glucose in a range that is safe for the individual.

Insulin is injected just under the skin.

It is important to check your blood glucose levels because they are used to guide the dose of insulin you need and how many doses you need each day.



## Insulin

### Types of insulin

Several brands of insulin are available in Australia for example, Novo Nordisk, Eli Lilly and Sanofi Aventis.

There are several types of insulin. Generally, insulin names describe how fast the insulin begins to work after it is injected.

It is important to know when the insulin you take begins to work, when it is most likely to cause hypoglycaemia and how long it continues to work for. This information is shown below and in the table on page 50.

- **Rapid acting insulin** is a clear liquid that begins to act about 5 to 10 minutes after it is injected and then acts for 3 to 5 hours.
- **Short acting insulin** is a clear liquid that begins to act about 15 to 30 minutes after it is injected and acts for 4 to 8 hours.
- **Intermediate acting insulin** begins to act in 2 to 3 hours and continues to act for 13 to 15 hours. Intermediate acting insulins are cloudy and must be gently mixed before use.
- **Long acting insulin.** Long acting insulins are a clear liquid and act for 17 to 23 hours. These insulins cannot be mixed with other insulins or injected into the same place as other insulins because the way they act can be affected.
- **Ultra long acting insulin.** Ultra long acting insulin, Toujeo 300 Units/mL, is a clear fluid and acts for 20-24 hours. Toujeo cannot be mixed with other insulins.
- **Premixed insulins** consist of two different insulins premixed in one container, usually a rapid acting and an intermediate acting insulin OR a short and intermediate acting insulin. Premixed insulins are also called biphasic insulins and must be mixed gently before use.

You can check your risk of hypoglycaemia by completing the Hypo risk assessment tool on pages 24–25.



## Insulin

**Common insulins available in Australia. Column 4 shows the main hypoglycaemia risk times but hypoglycaemia can occur at any time especially if you:**

- Do not eat.
- Are vomiting.
- Do extra activity.
- Are using a sulphonylurea.
- Have too much insulin.
- Drink too much alcohol.

Type of insulin and common brand names	What the insulin looks like	When the insulin starts to work	How long the insulin works for	Main hypoglycaemia risk time after you inject insulin
<b>Rapid acting</b> Novorapid Humalog Apidra	Clear liquid	5–10 minutes after injected	3–5 hours	60–90 minutes after insulin is injected
<b>Short acting</b> Actrapid Humulin R	Clear liquid	15–30 minutes after injected	4–8 hours	2–4 hours after insulin is injected
<b>Intermediate acting</b> Protophane Humulin NPH	Cloudy and needs to be gently mixed	2–3 hours after injected	13–15 hours	6–10 hours after insulin is injected
<b>Long acting</b> Levemir Lantus	Clear liquid	1–3 hours after injected	17–23 hours	5–10 hours after insulin is injected
<b>Ultra long acting</b> Toujeo	Clear liquid	1–3 hours after injected	Up to 24 hours	1-6 hours after insulin is injected
<b>Premixed*</b> Humalog Mix NovoMix Humulin Mixtard	Cloudy and needs to be gently mixed	Depends on combination of insulins used	Depends on combination of insulins used	Depends on combination of insulins used. Short, rapid or intermediate acting insulins. Check with your doctor or diabetes educator

\*Premixed insulin is also called Biphasic insulin because it contains two types of insulin, usually intermediate and a short or rapid acting insulin in various proportions. It is important to check when the insulin starts to work and how long it works for to decide your risk of hypoglycaemia.

## Insulin

Many insulins come in prefilled disposable 'pens' that make administering the insulin easy. The needles are very short and fine, so the injections hurt less than pricking the finger to check blood glucose. Most people use insulin pens but some people prefer to use an insulin syringe.

### When should insulin be taken?

Insulin is usually taken before or with meals. The number of doses each individual needs depends on the types of insulin prescribed. Some people have an injection before each meal and an injection at bedtime (basal bolus). Others have an injection before breakfast and before the evening meal. Others have an injection before breakfast and another before the evening meal or before bed. The person's blood glucose levels are used to guide the:

- Dose of insulin they need.
- How many doses they need each day.

### How to inject insulin

Make sure you change the place you inject insulin into each time you inject. It is important to inject your insulin into a different place each time so the skin does not become tough and thick. If that happens the insulin is not absorbed properly.

Check your insulin injection sites regularly for bruising or hardening lumps. If you notice anything different about your insulin injection sites see your doctor or diabetes educator.

**Main side effects**

- Hypoglycaemia (hypo) is the most common side effect of insulin. See the hypoglycaemia risk form on pages 24–25 to work out your risk of having a hypo and talk with your family, doctor and diabetes educator about how to reduce your hypoglycaemia risk.
- Low blood glucose can cause confusion and make it difficult for you to recognise and treat hypoglycaemia. It is important to have a system in place so you can call family or friends or the ambulance for help.
- If you have a hypoglycaemic episode tell your doctor or diabetes educator and request a health check and medicine review. Check your medicine list, the way you take your medicines and your general health. You may need to reduce your insulin doses or change the type of insulin you use.
- See your doctor or diabetes educator if you have any questions about your insulin type or dose.



## Insulin

### Storing insulin

Insulin needs to be kept cool so it works properly. Unopened insulin vials, pens or bottles should be kept in the refrigerator (2 to 8 degrees). Opened vials, pens or bottles can be kept out of the refrigerator but away from heat and light.

### When to seek help

Contact your doctor or diabetes educator if:

- Your blood glucose readings are constantly above or below your target range.
- You often feel faint or shaky.
- Your heart beats rapidly, especially if you feel faint and shaky and tired at the same time.
- You feel tired and have difficulty concentrating.
- Your family/friends think your behaviour is changing.

These might be signs of hypoglycaemia.

Contact your doctor or diabetes educator if your blood glucose is consistently in the high range because high blood glucose increases the risk of falls, changes in your vision and confusion.

The best sign of high blood glucose is your blood glucose level because blood glucose can be high and not cause many symptoms.

Signs of high blood glucose you may experience are:

- Tiredness.
- Confusion.
- Passing a lot of urine.
- Thirst.
- Wounds that don't heal.

It is important to have a plan about how to cope when you are sick.

Dispose of used needles and lancets correctly (page 31).

## General sick day care for older people with diabetes

It is important that you have a plan to manage your diabetes when you are sick. Ask your diabetes educator or doctor to help you develop a plan that suits you. The following information is general advice. People with type 1 diabetes may need slightly different advice from people with type 2 diabetes. For example, it is important that people with type 1 diabetes check for ketones when they are unwell and continue to take their insulin.

It is important to take extra care if you feel unwell or are very stressed, have an infection or are in more pain than usual. These things can cause your blood glucose to go high. It is important to treat the reason/cause of your high blood glucose.

Sometimes it can be difficult to tell if you have an infection because older people often do not have the typical symptoms such as a high temperature, thirst, breathlessness and pain. A change in your blood glucose might be the first indication that something is not quite right.

If you check your blood glucose and it is higher than usual and you feel unwell start checking your blood glucose more frequently e.g. every 2–4 hours and note whether it is getting higher or returning to your target blood glucose range.

See your doctor early if your blood glucose is higher than usual, you are vomiting and cannot keep anything down and cannot work out why your blood glucose is high.

A rise in blood glucose might be the first sign of illness.

If you notice your blood glucose is higher than usual and you feel unwell, start checking your blood glucose more frequently e.g. every 2–4 hours.



If your blood glucose is getting higher make sure you:

- Tell someone your blood glucose is higher than normal, for example tell your spouse or family, carer or a trusted neighbour. Ask that person to check in on you within 2–4 hours to see whether you are getting better and what is happening to your blood glucose.
- Keep drinking and eating small frequent meals if possible.
- Do not stop your glucose lowering medicines without checking with your doctor or diabetes educator.
- Check your blood ketones every 2–4 hours if the doctor or diabetes educator has taught you how, *especially* if you have type 1 diabetes or your blood glucose is over 15 mmol/L for two consecutive readings.
- If your blood glucose is higher than usual, you are vomiting and cannot keep food and fluids down, cannot think straight or cannot take your glucose lowering or other medicines, go to your doctor or emergency department.
- New glucose lowering medicines become available from time-to-time. Your doctor or diabetes educator will tell you about them and if they are suitable for you.

Make an appointment with your doctor or diabetes educator to develop a Sick Day Care Plan.

## Section 4

### Other sources of information

You must be given a CMI when you collect your prescription medicines from the pharmacist.

Ask your diabetes educator, doctor or pharmacist to help you access any of the information you are interested in.

Your local library can also help you access online information.

#### Written information

Consumer Medicines Information (CMI) - Package insert, mandatory in Australia with prescription medicines.

<https://www.tga.gov.au/consumer-medicines-information-cmi>

Diabetes Australia.

<http://www.diabetesaustralia.com.au/>

#### Useful websites

##### National Diabetes Service Scheme (NDSS):

<https://www.ndss.com.au/older-people>

- Healthy Eating for Older People.
- You and Your Health Care Team.
- Managing Diabetes as You Age.
- Diabetes management in aged care: a practical guide (currently under review).

##### National Prescribing Service (NPS):

What is consumer medicines information?

[http://www.nps.org.au/\\_\\_data/assets/pdf\\_file/0010/177058/CMI-Fact-Sheet.pdf](http://www.nps.org.au/__data/assets/pdf_file/0010/177058/CMI-Fact-Sheet.pdf)

Medimate.

[http://www.nps.org.au/\\_\\_data/assets/pdf\\_file/0003/211593/Medimate\\_English.pdf](http://www.nps.org.au/__data/assets/pdf_file/0003/211593/Medimate_English.pdf)

#### Information about Ageing:

My Aged Care.

<http://www.myagedcare.gov.au/>

Council on the Ageing (COTA).

<http://www.cota.org.au/australia/>

## Information about dementia:

Alzheimer's Australia.

<https://fightdementia.org.au/>

Dementia Care Australia.

<http://www.dementiacareaustralia.com/>

## Information about planning for Sick Days:

Australian Diabetes Educators Association Guidelines for Sick Day Management for People with Diabetes.

People with Type 1 diabetes:

<http://www.adea.com.au/wp-content/uploads/2015/12/sick-day-booklet-type-1-single-page-final.pdf>

People with Type 2 diabetes:

<http://www.adea.com.au/wp-content/uploads/2015/12/sick-day-booklet-type-2-single-pages-final.pdf>

## 'Apps' for Smart Phones/Tablets

- Glucose Buddy™
- Calorie King™
- Diabetes Australia™
- MedicineList+™ (NPS MedicineWise)







