DIABETES MANAGEMENT IN AGED CARE: FAST FACTS FOR CARE WORKERS
This resource contains information about diabetes in older people and how to manage diabetes in a residential care setting.

The Fast facts have been written for care staff. The information in this resource has been drawn from the ‘Fast facts’ sections at the start of each chapter in Diabetes management in aged care: a practical handbook. For more information on any of the Fast facts topics, see the handbook.

You will find the handbook and further information about diabetes at ndss.com.au or by the NDSS helpline and speaking to your state or territory diabetes organisation on 1300 136 588.
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1. What is diabetes?

When someone has diabetes, their body can’t maintain healthy levels of glucose in the blood. Glucose is a form of sugar which is the main source of energy for our bodies.

To make your body work properly, you need to convert glucose from food to energy. This conversion occurs in the cells of the body. A hormone called insulin is essential for this to happen. Insulin helps glucose move from the blood into the cells. In people with diabetes, the pancreas doesn’t produce enough – or any – insulin, or the insulin that is produced doesn’t work properly, which means the glucose stays in the blood and makes their blood glucose levels high.

There are three main types of diabetes:

• type 1 diabetes
• type 2 diabetes
• gestational (pregnancy) diabetes.
1. What is diabetes?

There are many myths about diabetes which are not true and can leave you feeling confused. Here are the facts behind some of the common myths.

‘People with diabetes can’t eat sugar’ – not true

Because diabetes is a condition where your blood glucose level is too high, many people think they need to avoid sugars and foods containing sugar. However, if they are eaten as part of a healthy meal plan – and combined with regular exercise – sugar, lollies and desserts can be eaten by people with diabetes in small amounts. This is the recommendation for all Australians, not just those with diabetes.

‘Diabetes is not serious’ – not true

There is no such thing as ‘mild’ diabetes. All types of diabetes are serious and can lead to complications if not well managed. Diabetes can affect quality of life and can reduce life expectancy.

‘All types of diabetes are the same’ – not true

The main types of diabetes are type 1, type 2 and gestational diabetes. There are also other forms of diabetes but they are less common.

Each type of diabetes has different causes and is managed in different ways. However, once someone has diabetes, they will need to manage it every day (unless it’s gestational diabetes, which needs managing while pregnant but usually goes away once the baby is born). All types of diabetes are complex and serious.

‘Diabetes can be prevented in all cases’ – not true

Not all types of diabetes can be prevented. Type 1 is an autoimmune condition; there is no cure and no prevention. Nobody knows what causes type 1 diabetes.

There is no single cause of type 2 diabetes, but there are well-established risk factors. Your risk of developing diabetes is affected by things you can’t change, such as family history, age and your ethnic background. However, it’s estimated that up to 58% of type 2 diabetes can be prevented or delayed by modifying lifestyle factors such as exercise and diet.

‘You have to be overweight or obese to develop diabetes’ – not true

Being overweight or obese is one risk factor for type 2 diabetes, but it’s not a direct cause. Some people who are overweight will not develop type 2 diabetes while some people who are a healthy weight will develop type 2 diabetes.

Type 1 diabetes is not preventable and is not caused by being overweight.
1. What is diabetes?

‘You only get type 1 diabetes when you’re young’ – not true
Type 1 diabetes can occur at any age. It often occurs in children and young adults, but older people can also develop type 1 diabetes.

‘You only get type 2 diabetes when you’re old’ – not true
Type 2 diabetes usually develops in adults over the age of 45 years, but it’s becoming more common in younger age groups, including children, adolescents and young adults.

‘People with diabetes should eat a diabetic diet’ – not true
There is no such thing as a ‘diabetic diet’. People with diabetes don’t need a special diet, or things like artificially sweetened, low-joule, diet or sugar-free jams, chocolates or treats. They should aim to eat a healthy diet, the same as everybody else.

‘Only people with type 1 diabetes need insulin’ – not true
It’s true that people with type 1 diabetes need to take insulin every day of their lives. But some people with type 2 diabetes also need to take insulin every day.

Type 2 diabetes does not become type 1 diabetes when a person starts taking insulin.

‘People who have diabetes complications have not looked after themselves properly’ – not true
Diabetes can affect the normal function of the heart, brain, kidneys, eyes and feet, and it can also cause digestive problems or problems with sexual function. Having regular checks can help avoid the damage diabetes can cause. People should not be blamed if they do have complications, as this may have been out of their control.
2. Type 1 diabetes

Type 1 diabetes:
- is an autoimmune disease where the body destroys the cells that produce insulin in the pancreas – the beta cells
- is a less common form of diabetes – only 10–15% of people with diabetes have this type of diabetes
- often occurs in people under 30 years of age, but it can occur at any age, including in older people
- requires the person to take insulin every day for the rest of their life using a syringe or insulin pen device or by using an insulin pump.

In type 1 diabetes, the pancreas stops making insulin.
3. Type 2 diabetes

Type 2 diabetes:
- is a complex disease where the pancreas is not producing enough insulin or the insulin is not working well enough
- is the most common form of diabetes – it affects 85–90% of all people with diabetes
- usually occurs in adults but may occur in younger people
- up to 25% of people over the age of 65 have type 2 diabetes
- most people who are diagnosed will eventually need glucose lowering medicines to manage their diabetes, and more than half will eventually need insulin.

In type 2 diabetes, the pancreas makes some insulin but it’s not working as well as it used to.
Both type 1 and type 2 diabetes can occur at any age.

The signs and symptoms of diabetes in older people can be non-specific, so they may not be as obvious as in younger people. As a result, diabetes can be mistaken for other causes – including ‘getting old’ – which can delay the diagnosis.

Signs and symptoms in older people that may indicate diabetes are shown below.

- feeling very thirsty
- blurry vision
- extreme tiredness
- slow wound-healing
- cognitive changes or confusion
- unexplained weight loss
- frequent urination or incontinence

**Actions**

If you notice any of the signs or symptoms above, let your supervisor know.
For older people, especially those who live in an aged care facility, helping them maintain the best quality of life should be the main principle of diabetes management.

Monitoring their blood glucose levels is one way to do this, but it’s just part of an overall management plan. Diabetes care requires a balance between healthy eating, physical activity and medicines, such as tablets and insulin, if taken. Other things like stress and other illness can also have an effect on a person’s diabetes.
6. Blood glucose monitoring

One aim of diabetes treatment is to keep blood glucose levels (BGLs) within a specified range. This helps to avoid low (hypoglycaemia) and high (hyperglycaemia) levels.

The levels should be set for each individual but reviewed regularly by their health care team. A person’s recommended range may change over time, as they get older or as other health needs change.

The frequency and timing of blood glucose monitoring should also be tailored to each individual. Some may not require any monitoring, some twice a day and others more often. The frequency and timing may be changed over time or at certain times such as during an illness.

The way to check BGLs is using a blood glucose meter. To use the meter, you place a test strip in the meter and add a small drop of blood from a finger-prick onto the testing strip. The meter then reads the strip, and a number comes up on the screen. This number is the BGL.

Some residents may be able to check their own BGLs, and should be encouraged to do so; others may need assistance from care staff. Staff performing blood glucose monitoring should be trained in how to do this and in how to respond to readings recorded.

It’s important to record the BGL in the appropriate chart, along with any actions resulting from the readings.

To provide a long term pattern of blood glucose control an individual will have a blood test that measures the BGL over the past two to three months. This test is arranged by the doctor and is called an A1c or a Haemoglobin A1c (HbA1c).

Some people who have type 2 diabetes that is managed by diet and activity alone, may not do regular blood glucose tests and may use the HbA1c to monitor their diabetes.
Hypoglycaemia (often known as a ‘hypo’) means a low BGL. It can occur in people who inject insulin or take certain diabetes medications, and it can happen quickly. It doesn’t occur in people who manage diabetes through a healthy eating plan without using medications.

Hypoglycaemia is dangerous, and can be fatal in older people. Causes of hypoglycaemia can include:

- too much insulin or diabetes medication
- a delayed or missed meal
- eating only part of a meal and skipping the carbohydrates such as the potatoes, rice, bread or fruit
- planned or unplanned exercise
- drinking alcohol.

**Actions**

- A hypo needs to be treated immediately. If it’s not treated quickly, the resident’s BGL will continue to fall and their condition may progress to:
  - confusion
  - loss of consciousness/seizures
  - in extreme cases, coma and death.
- DO NOT leave the resident alone.
- If you are trained in managing hypos, go ahead and treat the resident.
- If you are not trained in how to treat a hypo, call for a supervisor immediately.

The images below show some signs and symptoms of hypo that people may experience.

- sudden dizziness or weakness, particularly in the legs (‘jelly legs’), which may present as stroke-like symptoms
- hunger
- tingling around the mouth and face
- sweating (usually a cold sweat)
- tachycardia (an abnormally fast heart rate) or palpitations

- feelings of anxiety or unspecified fear
- poor concentration
- drowsiness

The person who is having the hypo may not recognise the signs and symptoms – and they may not be obvious to other people, either.
8. Hyperglycaemia (high blood glucose level)

Hyperglycaemia can occur in anyone who has diabetes, when their BGLs are too high. It often happens slowly but it can also happen suddenly, depending on the cause.

Causes of hyperglycaemia may include:
- too little insulin or diabetes medicine
- food intake not being covered adequately by insulin or medication
- a decrease in activity
- illness, infection, injury or pain
- emotional stress
- medicine used to treat other illnesses, such as steroids
- their insulin pump not working properly (this can bring on hyperglycaemia suddenly).

Below are some of the signs and symptoms of hyperglycaemia the person may feel:
- thirst (although this is often absent in older people)
- oral or genital thrush
- drier than normal skin and lips
- a urinary tract infection
- increased/excessive amounts of urine
- poor healing.

Older people sometimes feel no symptoms but others might notice the following:
- sunken eyes
- abnormal fatigue (the person may spend the day sleeping in a chair)
- abnormal vagueness or disinterest
- a fruity smell on the breath (in people with type 1 diabetes)
- difficulty in rousing them
- the sound of snoring while breathing.

Actions
- A high BGL every now and then is not a problem. However, action should be taken if the reason for the resident’s high BGL is unknown; if they have had high BGLs for several days; or if they have symptoms of hyperglycaemia.
- If you notice a resident with any of the symptoms of hyperglycaemia, or if you are not trained in hyperglycaemia management but you think something is ‘not quite right’, let your supervisor know.
- If you are trained in hyperglycaemia management, follow your RACF’s guidelines.
9. Sick day management

Being sick can make things more difficult for a person with diabetes. The illness might cause their blood glucose levels to rise, and it might also make it harder to manage their diabetes.

How diabetes is managed during an illness depends on whether the person has type 1 or type 2 diabetes. Residents may need more frequent blood glucose monitoring and more insulin (if they usually take insulin).

**Actions**

- Take action when you notice the symptoms or signs of an illness.
- If you think a resident is sick, tell a supervisor.
- If you are trained in sick day management, follow your RACF’s guidelines.

- fever
- sore throat
- runny or stuffy nose
- muscle or body aches
- headache
- tiredness
- cough
- diarrhoea
- vomiting
Glucose lowering medicines are prescribed for people with type 2 diabetes when their disease has progressed to the point where their blood glucose can no longer be effectively managed by diet and physical activity alone. In some cases this occurs soon after diagnosis, because some people with type 2 diabetes will have been living with the condition undiagnosed for some time.

More than 85% of people with type 2 diabetes eventually require glucose lowering medications.

Glucose lowering medicines are different from insulin, and they are not merely insulin that is given in tablet form.

The way your body uses medicines can change as you age, and medicines can work differently if you have a poor appetite, miss a meal or become less active.

**Actions**

- Follow the ‘five rights’ when administering medicine:
  
  **Staff should administer:**
  
  - the correct medicine
  - to the correct person
  - in the correct dose
  - by the correct method
  - at the correct time.

- Let a supervisor know if a resident skips a meal, as this may affect their BGLs.
Insulin is manufactured in the beta cells of the pancreas.
• In all people with type 1 diabetes, their pancreas can’t produce its own insulin, so they need to give themselves insulin every day.
• In people with type 2 diabetes, their pancreas is not producing enough insulin, or the insulin is not working well enough. At the beginning, many people with type 2 can manage their diabetes with diet and exercise (though some will require glucose lowering medicines straight away), but as they get older, and their diabetes progresses, they may need glucose lowering medicines or insulin.

Insulin can’t be taken orally, via tablets or capsules: it must be given using a needle, insulin pen device or pump.

There are different types of insulin, including rapid-acting, short-acting, intermediate-acting, long-acting and pre-mixed insulin.

Depending on the resident and type of insulin and insulin-giving device being used, the insulin may be given once a day or several times a day, depending on their needs.

If you are going to give insulin to residents, you must be trained to do so.

**HOW DOES INSULIN WORK?**
Managing diabetes well helps to prevent or delay diabetic complications, and to reduce their severity. High blood glucose, with any type of diabetes, can damage parts of the body. Diabetes complications can include:

- Heart attack, stroke or heart failure
- Vision problems
- Kidney disease and kidney failure
- Decreased blood supply to the legs
- Gastrointestinal problems
- Sexual health problems
- Dental problems
- Increased risk of deafness
- Increased risk of infection
- Skin problems
- Increased risk of depression and Alzheimer's

All people with diabetes should have annual complications screening by their health care team to identify and monitor any issues.
Healthy eating helps to manage diabetes.

People with diabetes should eat the same healthy foods as other residents: they don’t need a special diet, and they can eat sugar and desserts.

Often, older people lose their appetite or have problems with their mouth, teeth or swallowing. If you notice this, let a supervisor know.

Losing weight when you are older can sometimes do more harm than good. If people lose muscle, this can affect their functional ability and make them more prone to falls.

Read the following ‘Tips & traps’ for advice about how to help your residents maintain a healthy diet.

**Tips & traps: Encourage healthy eating**

- Make sure the resident’s meal is set up where they can reach it, and their cutlery is also within easy reach. All food should be accessible and packets open.
- For people who can’t see their meal properly, provide a description of where particular food is on the plate, and try to place things in the same layout for each meal.
- If the resident has dentures, make sure they are in place, and that they are clean and fit well.
- Check that the person has no mouth problems, such as a dry mouth, furred tongue, ulcers or tooth decay. Make sure their mouth is moist before meals.
- If the resident has a small appetite, provide smaller, attractively presented meals.
- If a person has difficulty swallowing or increased coughing/choking during a meal, refer them for medical assessment. Softer meals may be helpful but pureed food is not necessary for most people and can be unappetising.
- Advise residents that if they are on a glucose lowering medicine (insulin or a sulphonylurea), skipping their meal could cause hypoglycaemia. If they don’t eat their meal, they need to consume some carbohydrate from a different source (eg milk shake, toast or bread, fruit juice, custard or dessert).
14. Sexual health

Sexual health is often overlooked in people who live in residential care. However, sexual health and sexual health problems should be assessed and managed in the same way as any other health concern.

Sexual health includes being able to maintain healthy intimate relationships. Sexual function is affected by low and high blood glucose levels and by long-term diabetes complications. Sexual health problems caused by diabetes complications can include erectile dysfunction in men and vaginal dryness in women.

**Actions**

- Make sure sexual health is acknowledged as important.
- If you think a resident is having sexual health problems, tell a supervisor.
15. Mental health

**Depression is a condition that may affect diabetes and also be affected by diabetes.**

Symptoms of anxiety and depression in older people are sometimes not recognised because they are seen to be part of ‘getting old’.

It’s important to tell a supervisor if you notice the following signs or symptoms in a resident:

- sadness
- tiredness or sleeping a lot
- trouble falling or staying asleep
- unexplained aches and pains
- slowed movement or speech
- reluctance to participate in activities
- loss of appetite or not eating
- neglecting personal care (if they usually do this)
- a fixation on death or talking about self-harm or suicide.

You can also help residents manage their own health by:

- detecting and reporting (early) any changes in their:
  - behaviour
  - mood
  - pain
  - BGLs
  - physical symptoms.
- ensuring they take their medicines as prescribed
- encouraging them to eat healthy and nutritious meals
- giving them opportunities for social activity and engagement with other residents, and their family members or support network (for example, encouraging them to eat meals in the dining room rather than alone)
- encouraging their active engagement in other preferred solitary or group activities, such as reading, arts and crafts
- providing opportunities for physical activity.

Symptoms of anxiety and depression in older people are sometimes not recognised because they can be seen as part of ‘getting old’.
Regular exercise is good for everyone, even older people.

It can:
- improve muscle and heart function
- reduce tension and stress
- increase mobility
- improve quality of life
- help lower blood fats, blood pressure and BGLs
- reduce the risk of health problems.

Exercise may seem difficult for people in RACFs but with the help of an exercise physiologist* or physiotherapist, plans can be developed for residents with issues such as vision problems, hearing loss, reduced physical energy and flexibility, or pain.

You can help by:
- encouraging and supporting residents to participate in activities
- making sure residents wear comfortable, well-fitting shoes
- check the residents feet after exercise for any redness or blisters
- providing plenty of fluids during exercise
- ensuring residents do not start new activities without checking with a supervisor
- watching for hypoglycaemia in residents this might affect.

*Note: An exercise physiologist is an allied health professional who specialises in designing, implementing and educating about exercise programs that prevent and manage chronic disease and injuries.
17. Foot care

Foot care is an important part of managing diabetes. The nerves and blood vessels to the feet can be damaged by having diabetes for many years.

In older people with diabetes, foot problems may contribute significantly to:

- pain or absence of pain
- a higher risk of falls
- the risk of significant wounds, infection, amputation and even death.

All residents with diabetes should have a foot care plan. It’s important that they – or you – undertake daily foot hygiene that includes:

- washing and drying their feet, especially between the toes
- moisturising the skin but avoid between the toes
- looking at their feet and telling your supervisor about skin changes or pain.

Residents with diabetes may not be able to feel their feet, so it’s important that they:

- wear shoes that fit well
- do not wear thongs – these are not recommended
- check the inside of their shoe for foreign bodies or broken lining or anything else that might damage their feet
- wear socks or stockings that are not too tight, with shoes
- never walk in bare feet, wear shoes during the day and have slippers available at night.
18. Skin care

As skin ages, it becomes thinner and loses elasticity and moisture. As a result, older people’s skin damages more easily, and it takes longer to heal if it gets cracked or torn. This process is a normal part of ageing, but diabetes can speed it up. Having diabetes can also make it slower to recover from skin infections and sores.

It’s important to:

- avoid over-washing the skin
- use warm – not hot – water to wash
- use a pH-neutral soap or non-soap cleanser
- pat the skin dry, rather than rubbing it vigorously
- moisturise the entire body after each bath, shower or body wash
- let a supervisor know if you notice any of the following in your residents:
  - redness
  - infection
  - cracks
  - itching
  - bruises
  - swelling of any of the limbs
  - changes in skin colour, moisture or temperature.

Having diabetes can also make it slower to recover from skin infections and sores.
19. Eye care

Diabetes can cause damage to the tiny blood vessels on the back of the eye (called the retina). People with diabetes need regular eye examinations by an optometrist or an ophthalmologist (eye doctor) to detect problems early.

It’s important to make sure that diminishing sight in older people with diabetes is not assumed to be a normal part of ageing, and it should be assessed by a doctor/optometrist.

If a resident with diabetes reports any of the following, let your supervisor know:

- sudden loss of sight or blurred vision
- flashes of lights in their eyes
- eye pain
- double vision
- redness or swelling of the eye or eyelid.

You can also help your residents by ensuring they have:

- their glasses clean and accessible, so they can wear them when they need them
- their sunglasses on when outside.

Development of diabetic retinopathy

People with diabetes need regular eye examinations by an optometrist or an ophthalmologist (eye doctor) to detect problems early.
People with diabetes have more glucose in their saliva than other people, which can result in more tooth decay and gum disease. Diabetes can also lead to some people having a dry mouth and other oral problems.

Following are some of the signs and symptoms of oral health problems. If you notice any of these in a resident who has diabetes, let a supervisor know:

- reduced appetite
- weight loss
- dry mouth
- bleeding gums
- red, swollen gums or tongue
- loose teeth
- a change in the way teeth fit together, or how the person is able to bite
- a change in the fit of dentures
- refusal to wear dentures
- pain or burning tongue or gums
- ulcers
- persistent bad breath.
21. National Diabetes Services Scheme

The National Diabetes Services Scheme (NDSS) is an initiative of the Australian Government. The scheme provides diabetes-related products at subsidised prices, as well as a range of information and services to people with diabetes. Registration is free and open to all Australians diagnosed with diabetes.

Registration

People who are registered on the NDSS have access to quality diabetes self-management support and education services delivered through:

• the infoline (phone 1300 136 588)
• the website at ndss.com.au
• individual and group education programs
• a range of diabetes-related resources, including fact sheets.

It’s important to register all newly diagnosed residents and those who have diabetes who are not yet registered with the NDSS. Contact the NDSS on 1300 136 588 to:

• check whether all eligible residents are registered
• register new residents
• update a registrant’s details if their diabetes management is changing to injecting insulin or a glucose lowering medicine
• update a registrant’s details with their new address when they move into the facility, or to advise the NDSS if the resident passes away.

Services, products and resources

Support services for people with diabetes who live in RACFs, and resources for staff (such as this guide), are provided through state- and territory-based agents. All resources are listed on the NDSS website at ndss.com.au and agents are available through the NDSS Infoline 1300 136 588 to discuss the services and resources they offer to RACFs in their area.

The NDSS supplies a large range of subsidised products that help people to affordably self-manage their diabetes. These include:

• subsidised blood glucose testing strips
• subsidised urine testing strips
• free insulin syringes and pen needles (if insulin or an approved non-insulin injectable medication is required)
• subsidised insulin pump consumables (for approved people with type 1 diabetes or gestational diabetes).

RACF residents can receive a further discount on some NDSS products if they hold one of the following concession cards:

• Health Care Card
• Pensioner Concession Card
• Safety Net Card
• Department of Veterans’ Affairs Card.

Diabetes-related products can be accessed through community pharmacy NDSS Access Points. RACF staff can find these on the NDSS Online Services Directory at http://osd.ndss.com.au/search/

For more information about the NDSS, visit the website at ndss.com.au or call the infoline on 1300 136 588.
The National Diabetes Services Scheme is an initiative of the Australian Government administered with the assistance of Diabetes Australia.

The Commonwealth is not responsible for any recommendations, views, ideas or techniques expressed in this publication.

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