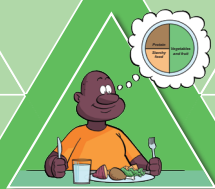


Living with Diabetes: Starting Insulin

*Adding years to your life and
quality to your years*

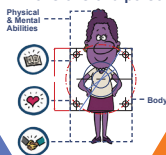


Eat right



Exercise right

Dimensions of a person.

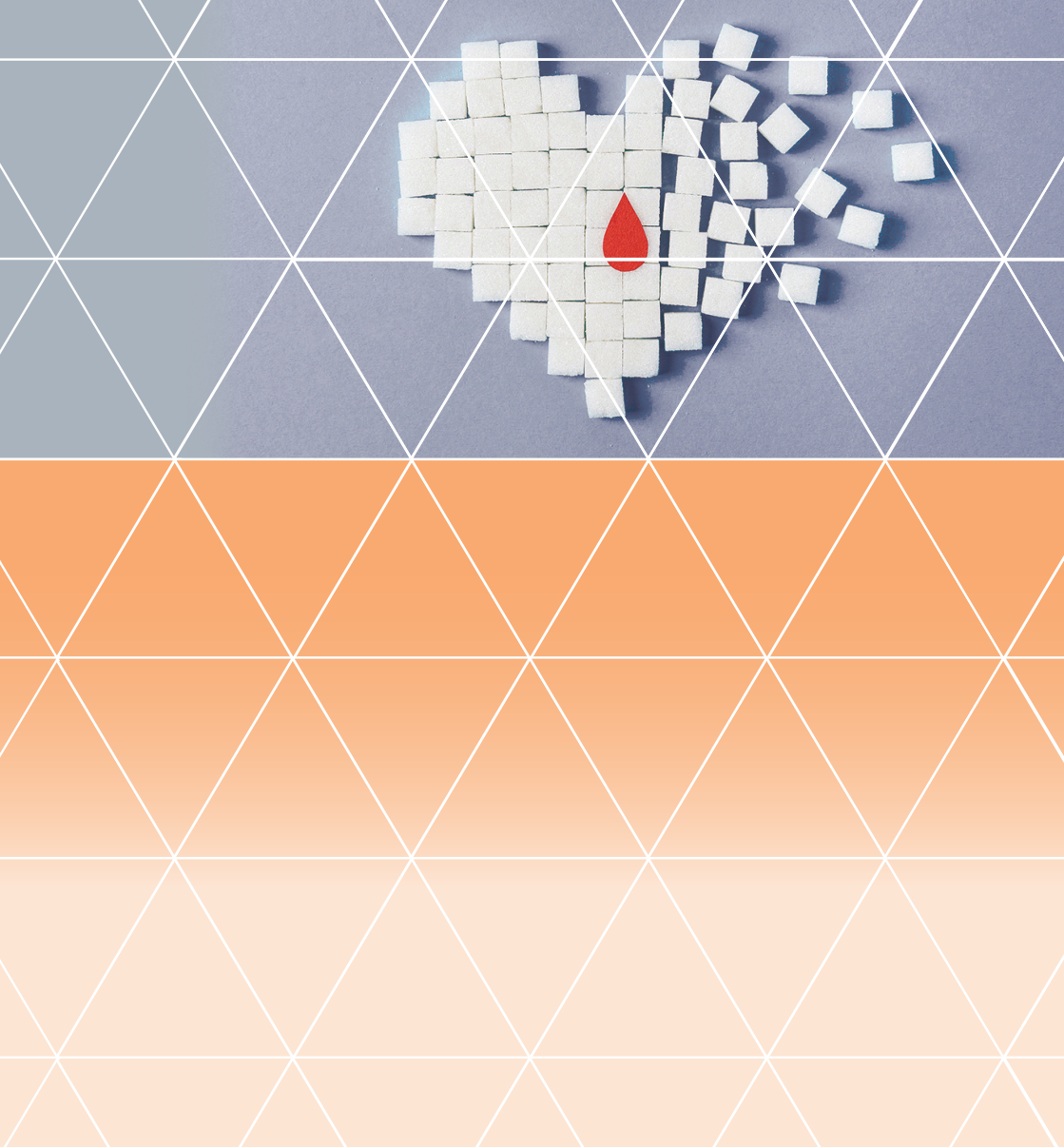


Treat right

Edited by Paul Rheeder and Tessa Marcus

 **TSHWANE
INSULIN
PROJECT**

Developing TIPS for Optimal
Glucose Control



Living with Diabetes: Starting Insulin

*Adding years to your life and
quality to your years*

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LIVING WITH DIABETES: STARTING INSULIN

Adding years to your life and quality to your years

You have diabetes. Like **most people with Type 2 diabetes**, you have tried to control your blood sugar by taking tablets, eating right, doing exercise and not smoking. But Type 2 diabetes is a disease where your body makes less and less insulin. After some time, taking tablets is not enough to control your blood sugar. You have to take insulin. Starting on insulin is not a failure. It is not your fault. It is just how this disease works.

Insulin is saving the lives of millions of people around the world. By including insulin in their diabetes treatment routine, people are adding years to their lives. They are also adding quality to their years, because they live and feel better.

To manage diabetes you have to treat right, eat right, exercise right and feel right. With insulin, the rules remain the same, but the routine changes. So what can you expect?

Diabetes treatment routine - when you start to inject insulin

- ✓ Inject insulin 1 x day.
- ✓ Eat snack before you sleep.
- ✓ Check your blood sugar in the morning.
- ✓ Continue taking diabetes tablets as prescribed.
- ✓ Continue taking other medicines as prescribed.
- ✓ Eat right.
- ✓ Check your blood sugar after a meal.
- ✓ Exercise right.
- ✓ Feel well, live better.



Managing diabetes using insulin is not easy. When you take insulin there is a lot to learn. There is a lot to do. And there is also a lot other people in your life have to learn to help you. You will succeed but it is hard work and it takes patience.

Just remember this amazing fact. When you inject **insulin** and your **diabetes treatment routine is working well** you **do not feel** the difference **in your body** BUT you **see it** in your **numbers**. When you inject **insulin** and your diabetes **treatment routine is not working well** you **feel** the difference **in your body** AND you **see it** in your **numbers**. How you feel and the numbers you see are your guides to action.

This manual is meant to be used by you, your family and friends, and the health care team. In it you will learn about taking control of your diabetes using insulin. **There are 15 topics.**

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GLOSSARY

Adapted from <https://www.diabetes.co.uk/glossary/o.html>

2

There are many new words in this manual. This list helps you check what each word means. Don't worry. You will soon get to know all these words well.

Word	What the word means
A acute	A health problem that happens suddenly and for a short time.
A1C also called HbA1C	The test that measures a person's average blood sugar level over the past 2 to 3 months.
B blood sugar	The main sugar found in the blood. It is the main source of energy. Also called blood glucose.
blood pressure	The force of blood on the inside walls of blood vessels.
blood vessels	The big and small tubes that carry blood to and from all parts of the body.
bunion (BUN-yun)	A bulge on the first joint of the big toe. This spot can become red, sore, and infected.
C callus	A small area of skin, usually on the foot, that has become thick and hard from rubbing or pressure.
carbohydrate	One of the three main nutrients in food. Foods that provide carbohydrate are starches, vegetables, fruits, dairy products, and sugars.
cataract (KA-ter-act)	Clouding of the lens of the eye.
cholesterol	A type of fat produced by the liver and found in the blood. It is also found in some foods.
chronic	A health problem that is long lasting.
coma	a sleep-like state but a person is not conscious and.
complications	The harmful health effects of diabetes on different parts of the body, especially the eyes, heart, blood vessels, mouth and teeth, skin and feet, and kidneys.
D diabetes mellitus (MELL-ih-tus)	The condition that describes the body's inability to use blood sugar for energy. This happens when the body does not make insulin (Type 1) or it does not make enough or can't use insulin properly (Type 2)
dietitian	A healthcare professional who advises people about food and eating right.

F	fasting blood glucose test	The test of blood sugar levels after a person has not eaten for about 8 hours. It is usually done in the morning before a person eats.
	fat	One of the three main nutrients in food. It is found in butter, margarine, salad dressing, oil, nuts, meat, poultry, fish, and some dairy products. The body stores fat when it is not used.
G	gangrene	The death of body tissue, usually in the foot and lower leg. Usually caused by poor blood flow and infection. It can lead to amputation.
	glaucoma	an increase in fluid pressure inside the eye that may lead to loss of vision
	glucose	A kind of sugar.
	glucose tablets	Chewable tablets made of pure glucose used for treating hypoglycaemia.
H	HDL cholesterol	A fat in the blood. It is called good cholesterol because it helps remove extra fat from the blood and the body.
	High blood pressure	When blood flows through the blood vessels with a force greater than normal. It is also called hypertension (HY-per-TEN-shun). It increases the risk of heart attacks, stroke, kidney problems and death
	hormone	A chemical released into the blood to help the body function. Insulin, for example, is a hormone made in the pancreas that tells other cells when to use blood sugar for energy
	hyperglycemia (HY-per-gly-SEE-mee-uh)	This condition happens when the levels of sugar in the blood go above the normal range. It can be controlled by eating right and exercise.
	hypoglycemia (HY-po-gly-SEE-mee-uh)	This condition happens when the levels sugar in the blood go below the normal range (Below 4mmols). It is very dangerous and can cause coma. It is treated by taking carbohydrates like super Cs, sweets or juice.
I	immune system	The system that protects the body from viruses and bacteria or any “foreign” substances.
	impotence	This is when a man cannot get or maintain an erection.
	injection	An injection is a way of putting liquid medication or nutrients into the body with a syringe and needle.
	insulin	A hormone made in the pancreas that helps the body use sugar for energy.
	insulin pen	A device for injecting insulin that looks like a fountain pen and holds replaceable cartridges of insulin.
K	kidneys	These are two organs that filter waste from the blood that becomes pee.
	kidney failure	A chronic condition when the kidneys stop working and the body can't get rid of fluid and harmful wastes.

L	LDL cholesterol (kuh-LESS-tuh-rawl)	LDL is a fat found in the blood that takes cholesterol around the body to where it is needed for cell repair. It is called 'bad cholesterol' because it also leaves fat on the inside of artery walls.
	liver	This is an organ in the body. It changes food into energy, and removes alcohol and poisons from the blood. It makes bile, a substance that breaks down fats and helps rid the body of wastes.
	low blood pressure	This is a sudden drop in blood pressure. It is also called hypotension (hy-poh-TEN-shun). It can happen when you sit or stand up suddenly.
M	mg/dL (Milligrams per decilitre)	A milligram (mg) is the unit of measurement. It shows how much there is of a substance in a specific amount of fluid (e.g mgs blood sugar /dL blood).
	mmol/L	A millimole (mmol) is the a unit of measurement. It shows how much there is of a substance in a specific amount of fluid (e.g mmol blood sugar /dL blood
N	neuropathy	This is a disease of the nervous system. The most common form of this disease in diabetes is affects mainly the legs and feet.
O	optometrist	A healthcare professional who diagnoses and treats certain eye conditions and diseases.
	overweight and obese	Overweight is someone with an above-normal body weight. Obese is someone who is severely overweight.
P	pancreas	This is an organ in the body an organ that makes insulin and enzymes for digestion.
	pharmacist	This is a healthcare professional who prepares and distributes medicine to people.
	podiatrist	This is a doctor who examines feet and treats foot problems.
	protein	Proteins are one of the three main nutrients in food. Proteins are found in meat, poultry, fish, cheese, milk, dairy products, eggs, and dried beans.
R	risk	The chance of a person developing a condition or disease, as well as taking or not taking their medicines or following their treatment plan.
S	sharps container	A hard plastic container that is used to throw away used needles and syringes.
	stroke	This is condition caused by damage to blood vessels in the brain. It can affect a person's ability to speak or move parts of the body.
	type 1 diabetes	In this condition high levels of blood sugar are caused because the pancreas produces too little or no insulin. It usually affects young people, but it can also happen to adults.
	type 2 diabetes	In this condition high levels of blood sugar are caused because the pancreas produces too little or no insulin or the body can't use insulin properly. It usually affects older people, but it can also happen to young people.

EMOTIONAL WELLBEING

3

Living with diabetes can be very demanding. There are many things to understand. There are even more things to remember to do. There is always something new or different that you have to deal with, like starting on insulin treatment. And of course, there are the physical effects diabetes can sometimes have on your emotions. All this adds up to a lot of mental pressure.

Living with diabetes can be very stressful. You can feel like you are on an emotional rollercoaster. At times diabetes can make you feel angry and frustrated. At times it can make you feel guilty, anxious, sad or afraid. Sometimes you just feel overwhelmed by it all. All these feelings are normal and they are common among people who live with diabetes. But that does not make things any easier for you.



So, what can you do?

Well, what really matters is how you deal with mental pressures and your emotions. When you live with diabetes you have to learn to look after your psychological wellbeing. Psychological wellbeing is about taking care of your emotions and mental health. It is the same as having to take care of your body so that you stay as physically healthy as possible. And just like with your body, your emotions and feelings are not fixed. They change all the time, because you respond to things that are happening to you and around you. Your emotions and feelings affect how you think about what is happening. This means your sense of wellbeing can change.



(Ryff CD. Psychological well-being revisited: Advances in the science and practice of Eudaimonia. Psychother Psychosom. 2014.83(1): 10-28. doi:10.1159/000353263.)

Psychological wellbeing, just like physical health, can be divided into parts. One way is to divide it into a 6 part pie. Each part - self-acceptance, purpose in life, environmental mastery, positive relationships, personal growth and autonomy - represents a different dimension of mental health. The order you think of each one does not matter. Each part influences the others, so change in one often leads to change in other parts.

Also, your emotions and feelings may be different in each of the parts. This means that your sense of wellbeing could be better in some parts and worse in others.

Let's look at each.

Self-acceptance



One part of psychological well-being is about self-acceptance. This is about

- ✓ accepting who you are,
- ✓ just as you are,
- ✓ in the circumstances that you are in now.

Self-acceptance is about recognizing what you think are the good and the bad things about yourself and your situation AND still being able to feel worthy.

When you are less self-accepting, you usually only focus on what you think are negative things. You often are also very critical of yourself. You say things like “why did I do this to myself?”, “why can’t I do anything right?” or “why did this happen to me?” You can’t see the things that you have been able to achieve. Most of us have had thoughts like these at some point in our lives. The problem is, when you think like this, you can get stuck. You are so focused emotionally on your limitations, you don’t think about and use your abilities to look for solutions.

This changes when you are more self-accepting. Then, you not only acknowledge negative things, you take ownership of them. Also, you notice the big and small things you have achieved and the good people and things around them. And because being more self-accepting means you are able to be more balanced, you stop dwelling on your limitations. You start to think about and use your abilities to try find solutions to new challenges. You may say things like “I did not eat well at lunch time, but I did better at supper” or “I am not doing so well with exercise. I am going to ask someone to help get me going” or “I feel disappointed that I have to start insulin. But I am not going to let it stop me. I have come so far. I can learn how to get on top of this too.”

Purpose in life

Another part of psychological well-being is about having purpose in life. Living with diabetes can be very demanding. It may take up a lot of your time and effort. Sometimes it can take up a lot of your emotional and physical energy. It can affect your work and the things you do day-to-day. And it can affect your relationships. Managing diabetes using insulin can become the focus of everything you do all the time. When this happens, it takes over your purpose in life. It takes away the value you give to the everyday things you do. It may even make you feel like you have lost your value to the people around you.



Of course, managing diabetes can be a big part of your life. But you stop it from running you when the things you find important in your life are stronger than diabetes. So, although you always have to think about what you are doing, you are able to put diabetes in its rightful place. This helps you relate to diabetes

differently. It leads you to ask yourself questions like “what can I still do” or “how can I change the way I do things and still manage diabetes” . It helps you look for ways to keep on doing the things that you value.



BRIEF INTERVENTION

1. Let's talk about the things you like to do and people you like to be with.

Ask questions like:

- ? What do you really enjoy doing ?
- ? What is stopping you from doing these things?

2. Find the learning need. Focus on the dimensions that the person sees as preventing them from doing things that give them meaning. Are they talking about

- ? *Knowledge?*
- ? *Abilities and skills?*
- ? *Relationships with others?*
- ? *Sense of self and feelings?*

3. Find solutions together.

- ✓ Share information.
- ✓ Provide practical support.
- ✓ Ask the person how he or she can overcome the challenge.

Environmental mastery.

Environmental mastery is about how you feel about your abilities and power to manage the things around you (your environment) that you want or need to change. Good environmental mastery does not mean that you actually control your environment. No one can do this. What it means is that you have plans and ways of thinking about situations to help you cope when you are not in control.



To illustrate this part of psychological well-being, let's look at the need to eat right to control diabetes.

Food is important in everyone's life. It is how we keep ourselves alive and healthy. Food is also a part of our life stories. It gives us purpose in life. Through food we get a sense of what we value and have control over. We also use food to build relationships. The food we choose, the way we cook and eating together with friends and family all give us a sense of belonging and of being part of a bigger community.

Living with diabetes puts food into sharp focus. You have to pay attention to every aspect of food and eating. You have to think about what you buy, how you cook, what you eat, when you eat, how much you eat and sometimes even who you eat with. All of these demands can impact on your mood. They affect how you feel about yourself. They affect your relationships with other people. They can affect how you feel about your ability to eat right and take insulin and other medicines right.

Environmental mastery is about feeling that you have the ability to cope with the demands diabetes puts on everything around food, including the times when you don't or can't eat right. When you have good environmental mastery, food becomes emotionally less stressful. This is because you feel you have ways to cope with managing your eating with diabetes. Good environmental mastery means you are able to deal with challenges in a better way.

Positive relationships

We all know the saying "A person is a person because of other people" (Motho Ke Motho Ka Batho Babang or "Umntu ngumuntu ngabantu").



Everyone's psychological wellbeing depends on having positive relationships with other people. When you have positive relationships, you can share aspects of yourself and experience emotional intimacy. Positive relationships also make you feel connected, respected, secure and well-loved. When your relationships with other people are not positive, you can be hostile, distant and disconnected. Also, they can make you feel unloved, alone, insecure, unappreciated and disrespected.

It is important to want to have and be prepared to build positive relationships. This is especially true when you live with diabetes, especially when you start taking insulin. Sometimes, the important people in your life can help you get through the hard times. Sometimes, even when they want to help, they don't know how. So, you have to help them help you. To do this, you have to be aware of your own needs. And you have to let other people know what you want and how you feel they can support you. You build positive relationships by being clear and sharing your needs. You bring people in, without letting them take over or take away your independence.

There are a few basic things you can learn to do to keep relationships positive.

- ✓ Ask for help when you need it.
 - The people around you can't guess if you need help. You have to ask.
- ✓ Ask for help in the way you want it.
 - The people around you may want to help you, but they may not know how to help in the way you want it.
- ✓ Acknowledge your emotions but check your frustrations.
 - Be aware of and share your feelings about how diabetes may be making you feel.
 - Just as it is not your fault that you have diabetes, it is not their fault either.
- ✓ Be kind and considerate.
 - Try not to be over-demanding. Family and friends have to adjust to the changes in your life. At the same time, they have to continue with their lives.
- ✓ Find new friends.
 - Share experiences with people who live with diabetes outside of your family and friends.
 - It can help you get the support you need.
 - It can also relieve some of the pressure in your relationships with family and friends.

Personal growth

Here is something you might be surprised to know. Your belief in your ability to respond and adapt to changes in your world motivates you to see your own potential. When you can see your own potential, you find value in your actions. You are able to achieve goals that make you feel worthy. Your psychological well-being improves



- ✓ When you improve your understanding of how diabetes affects you;
- ✓ When you work out how you can better manage your health living with diabetes; and
- ✓ When you learn new skills, like injecting insulin and testing your blood sugar.
- ✓ When you see learning to manage diabetes as an opportunity for personal growth.

Autonomy

The need for autonomy is something all people have. It does not matter how young or how old you are. It does not matter how healthy or sick you are. Like everyone, you need to feel like you have and can make choices. You want to feel like you can also decide how to manage your health, your relationships and how you run your life.

Autonomy is about free will and self-determination. It is not about independence. So even when you depend on healthcare professionals, you need to feel like you have a say in any treatment decisions and how they are made. Even if you depend on other people to help you exercise right or eat right, you need to feel that the decisions that are made also come from you. You need to feel that you can choose what exercises you want to do, or when, how long and how often you will do them. You need to feel that you can choose what, when and how much you eat. When you have autonomy, you are more willing and motivated to do things that healthcare providers or other people suggest.

The opposite of autonomy is being controlled by someone or something from outside. In diabetes management, being instructed or told that you have to do things takes away your autonomy. These kinds of instructions can come from healthcare providers, including doctors and nurses. They can also come from family members and friends. Although they can be well meaning, when people give you instructions they may think and make you feel that you are not responsible enough. They may feel that you don't act in ways that they think you should. In the end, their actions reduce your sense of autonomy. They take away your motivation to act for yourself and your willingness to do the things they are telling you to do.



You might be surprised to know that your autonomy is also affected by the way you respond to the machines and equipment that you use to manage diabetes. You give away your sense of free will when you see your A1c or glucose meter blood sugar results like a 'good' or 'bad' mark in a school test or exam. You keep your autonomy when you see all your test results as a way to let you know where you are. Then, they become a motivation for you to act, to either keep on doing what you are doing or to make changes.

The more you have a sense of autonomy, the better your psychological wellbeing. You are more motivated to be healthier, to try to get better control of diabetes, or even to avoid complications that diabetes and its management can cause. And just as importantly, you are able to keep up your commitment to healthful actions, because what you do comes from you, rather than from something or someone outside.

Do you know?

The one thing you can be sure of is that psychological wellbeing is not a fixed thing. It changes and can be changed. This is why it is important to learn and be supported to learn to care for your emotions and feelings.



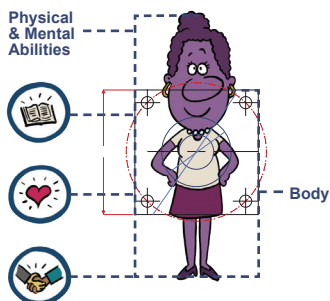
Your Goal: To achieve good emotional and mental wellbeing.

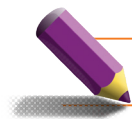
There are many different ways to achieve psychological wellbeing, but usually you need to do five things.



1. ***Become aware of your own feelings and thoughts***
that may be disturbing you or holding you back.
2. ***Identify the problem.***
What is the issue? What is disrupting you? Is it something in your environment? Is it something in your relationships? Is it about your sense of self? Is it about physical changes or challenges?
3. ***Step back and take stock.***
Make clear to yourself what is happening, how it makes you feel, how it makes you act, how it makes you relate to other people. Also find out more by talking or reading about the issue. Think about what you can change or do differently.
4. ***Create possible solutions.***
Put together your thoughts, feelings, experience and the things you found out. Identify what has changed – what you know, how you feel, how you relate. Make a plan to change.
5. ***Put your solutions into practice.***
You can start by doing just one thing that you feel you can do. Work to improve even only one aspect of your psychological wellbeing. Small changes can make a big difference to your well-being.

Dimensions of a person.





STARTING AND USING INSULIN

4

Over time diabetes affects the amount of insulin your body makes. This happens even **when you take tablets properly** and have excellent control of your blood sugars. This is why almost all people who have diabetes **have to start taking insulin injections**.

The **Number 1 priority** in diabetes management is to **control blood sugar** levels. Starting insulin is good news. Research shows that insulin injections are one of the best ways to do this. Taking insulin is an effective way to help you to stay as healthy as possible.



BRIEF INTERVENTIONS: KNOWLEDGE AND EXPERIENCE

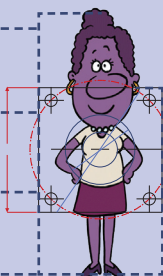
Ask the person questions like

- ? What do you know about who needs to inject insulin
- ? How do feel about having to start on insulin to control diabetes
- ? How do you feel about having to inject
- ? How confident are you that injecting insulin will help you get control of your blood sugar

Listen and relate what the person is saying

Dimensions of a person.

Physical
& Mental
Abilities



Body

- ? **Knowledge?** - e.g. things that need to be explained.
- ? **Abilities and skills?** - e.g. how to inject; how to measure; what the words mean, etc.
- ? **Relationships with others?** - e.g. who to tell; what to say; how family and friends will react to starting on insulin.
- ? **Sense of self and feelings?** - e.g. confidence about managing another thing; fear of injecting; sense of failure.

Find solutions together.

- ✓ Explore the issues –discuss feelings and relationships. Let them know how their concerns about support, information and skills will be addressed.

When you start injecting insulin there are new things that you need to learn and to practice. But you are not starting from scratch. **You** already **have** a lot of **knowledge and experience**. You already have **family** members and **friends** around you. And you have a **healthcare team**. They will **help and support** you all along the way of your journey with diabetes.

Do you know?

Starting on insulin does not mean you stop having to take your diabetes pills. You need to take both. You also need to take any other medicines you have been prescribed -like blood pressure pills.

The **goal of this next stage is to put you in charge** of your body and your **health** so that you are the master of this disease. To get started you need to know some facts about insulin and injecting.

Facts about insulin and injecting

Insulin is a hormone that controls the amount of sugar in your blood. You have to inject insulin when your body **cannot make insulin** (Type 1 diabetes) or it **does not make enough insulin** (Type 2 diabetes).

There is more than one **kind** of insulin that people can inject. They **all control blood sugar**. But each kind has different onset, peak time and duration characteristics.

Some insulins work for a long time. Some work for a short time. And some insulins are a mixture that work a long and short time.

Do you know?

Insulin is colour coded. Yellow is short acting, green is long acting and brown is a mixture of short and long. You will start with green insulin.



Like any medicine that you take, it is important for you to know the kind of insulin you inject. Ask if you have not been told or can't remember the name.

Insulin **has to be injected**. It cannot be swallowed as a tablet or syrup because it **breaks down** in the stomach **before** it gets into your blood. About **10ml** or less than a drop of insulin is injected each time.



BRIEF INTERVENTION: FEELINGS ABOUT INJECTING.

Ask questions like:

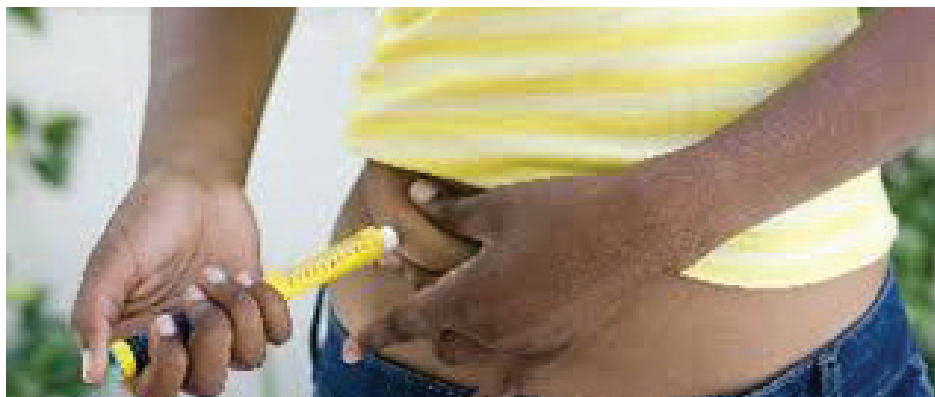
- ? What's your experience of giving blood or having an injection?
- ? How did it make you feel?
- ? In what ways do you think injecting insulin is the same or different from your past experience?

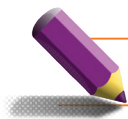
Relate what they say to the dimensions of the person.

Find solutions: Talk about things like how they have overcome fear and anxiety in the past, how they learn new information and skills, their motivation and how they can get new insights.

Do you know?

Injecting insulin is usually not painful. A small needle is used. It is very thin. Only a small amount of insulin is injected. When you start you will inject only 10 units. This is up to the first line on the syringe. That is less than one drop of water! Most patients get used to injecting quite quickly. Most importantly, you will be shown how to inject.





WHEN, WHERE AND HOW TO INJECT INSULIN

1. Taking insulin to keep blood sugar levels normal.

You doctor or nurse will find an insulin routine that will help you keep your blood glucose near normal.

Normal Blood Sugar Levels (see Bs and Cs)

Glucose meter (self-test):

- ✓ Between 4 and 7 before breakfast.
- ✓ Between 5 and 10 2 hours after a meal

A1c Test (lab test):

- ✓ less than 7%

2. When to inject insulin.

a) **Most** people on diabetes tablets who also need insulin usually follow a simple injecting routine. You start with:

- ☹ **ONE GREEN** injection
- ☹ taken **at night** between 21.00 and 22.00 (around bedtime)
- ☹ **10 units of insulin.**

The doctor or nurse will talk with you when you have to change your injecting routine.

b) **Some** people on diabetes tablets who have blood sugar not well controlled may need to start insulin twice a day and some people who were on once a day might need to change to twice a day injections.

- ☹ **TWO BROWN** injections
- ☹ ONE injection **half an hour before breakfast** and ONE injection **half an hour before supper**
- ☹ The number of units depend on your blood sugar levels and your weight and the nurse or doctor will tell you how much you need to inject before breakfast and before supper.

c. **Younger** people who have Type1 diabetes and **few** people with Type 2 diabetes have to use more than 2 injections per day (Green and Yellow injections)



Do you know?

You need to eat some food left over from supper or have a snack before you sleep in case your blood sugar drops in the night.

Your Goals.

- ✓ Inject the insulin as prescribed
- ✓ Eat a snack before you sleep (at about 22:00 hr) so that your sugar levels do not go low during the night
- ✓ Check your blood sugar level at least twice a day:
 - ✓ Check your blood sugar level in the morning (before you eat or drink)
 - ✓ Check your blood sugar level 2 hours after a meal (one day test after breakfast, next day after lunch and next day after supper and continue this)
- ✓ Continue taking diabetes tablets and other medication as prescribed
- ✓ Eat healthy.

3. Where to inject insulin

You can inject insulin in many parts of your body. The **best place to inject is on the belly** because that is where insulin gets into the blood fastest. Also, it is best to inject in the same general area (the belly) because the insulin will reach the blood at the same speed each time.



Tips for injecting on the belly

- ✓ Avoid the area directly around the bellybutton.
- ✓ Divide the belly into 4 equal parts.
- ✓ Rotate your injections. Inject in part 1 for one week. Then in the next week inject in part 2. Inject in part 3 in the next week. Inject in part four in the fourth week. Then start again.
- ✓ In each part, make sure that each new injection is about the width of your finger nail (1 cm) away from the previous one.



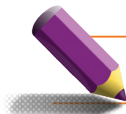
BRIEF INTERVENTION: PLOT WHERE TO INJECT

On your own or in pairs. Using paper and a pen.

Draw an outline of the general area where it is best to inject. Circle the belly button area. Now divide the general area into four parts. Label each part week 1, week 2 week 3 week 4.

Using the Picture and the Tips

Plot where you should inject each day. You can use a different colour, the first letter of the day of the week or a number to help you remember where to inject next.

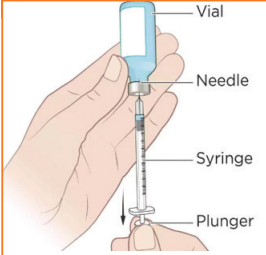

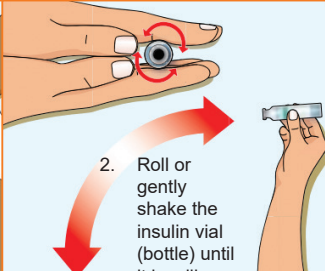
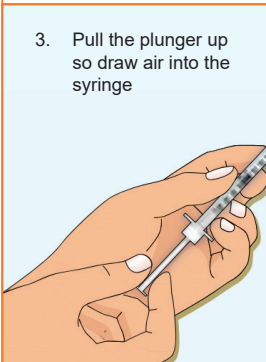
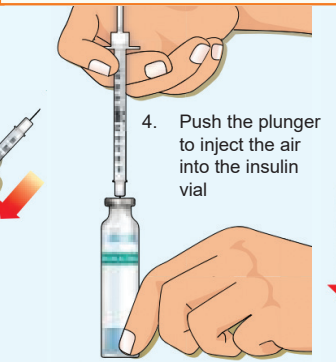
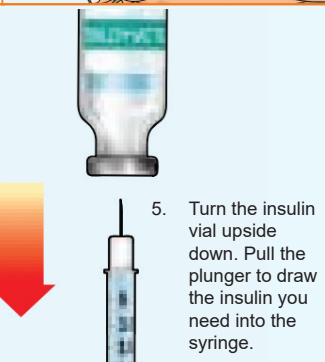
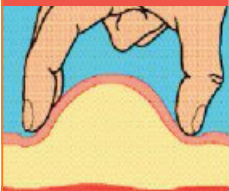
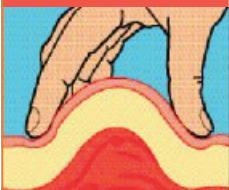
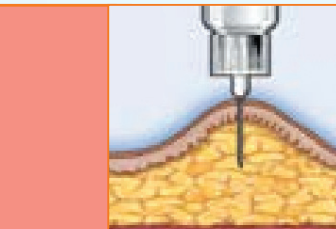
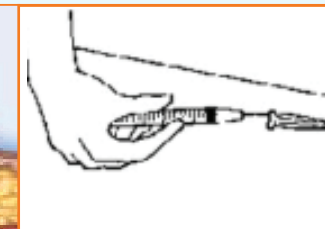




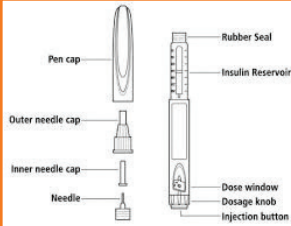
4. How to inject insulin

It is best to inject insulin using a small, thin needle. You can inject using a needled syringe or a needled pen.

HOW TO INJECT INSULIN USING A NEEDLE AND SYRINGE

 <p>The parts of a needle and syringe.</p>	 <p>1. Wash your hands before starting</p>	 <p>2. Roll or gently shake the insulin vial (bottle) until it is milky.</p>
 <p>3. Pull the plunger up so draw air into the syringe</p>	 <p>4. Push the plunger to inject the air into the insulin vial</p>	 <p>5. Turn the insulin vial upside down. Pull the plunger to draw the insulin you need into the syringe.</p>
<p>CORRECT PINCH UP</p>  <p>INCORRECT PINCH UP</p> 	 <p>6. Pinch up a fold of skin between 2 fingers. Don't pinch up muscle.</p> <p>7. Push the whole needle gently straight down through the skin. Then push the plunger into the syringe to inject the insulin.</p>	 <p>8. Gently take the needle and out. Safely recap the needle. Store it safely. The same needle and syringe can be used to inject insulin up to 5 times. If it's painful- it is time to use a new one.</p>

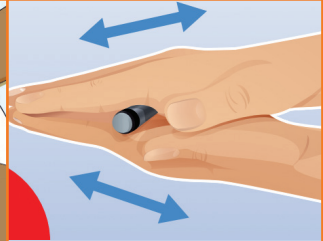
HOW TO INJECT USING AN INSULIN PEN



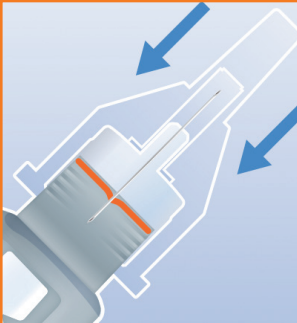
The parts of an insulin pen



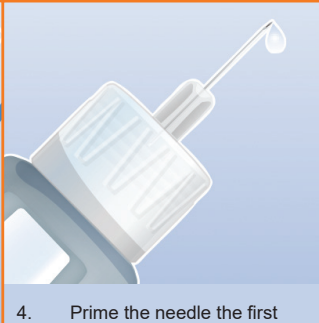
1. Wash your hands before starting



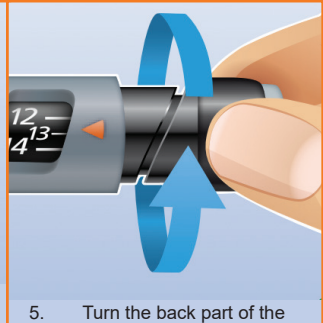
2. Role or shake the insulin until it is all milky.



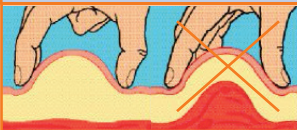
3. Remove the paper from the needle holder. Screw the needle firmly onto the pen device. Remove the inner cap to be able to prime or to inject. Replace this cap after the injection.



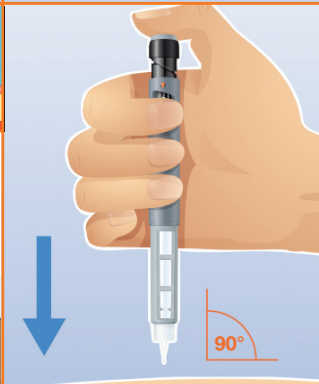
4. Prime the needle the first time you use it.
To prime the needle
 - turn the back end of the pen to 2.
 - press in the back end to get rid of air in the needle. Repeat until there is a drop of insulin on the tip of the needle.



5. Turn the back part of the pen to dial the correct amount of insulin to inject.



6. Pinch up a fold of skin between 2 fingers. Don't pinch up muscle.



7. Push the whole needle gently straight down through the skin.

8. Hold the pen as shown in the picture. Push in the back firmly with your thumb. Count to 10. Gently take the needle out of the skin.

9. Gently take the needle out.

10. Unscrew the needle from the pen after each injection. Throw away the needle safely before screwing a new needle onto the pen.

11. Put the inner cap on after each injection. Put the outer cap of the pen back on. Store the pen safely.

5. Insulin and Equipment Safety

Your own health and the safety of everyone around you depends on knowing how to check, store and dispose of medicine and equipment safely. This is especially true when you start to use insulin.

All medicine and equipment, including insulin, syringed needles or needed pens, the glucose meter and any other things you need to manage diabetes need to be **safe to use, safely stored, and safely disposed**.

This means making sure that

- ✓ The quality of the medicine is protected so that it works like it should.
- ✓ The quality of the equipment is protected so that it works like it should.
- ✓ The medicine and the equipment do not put any one in danger.

INSULIN SAFETY TIPS

Always Check Before Use

- ✓ Check the expiration date on the insulin bottle (vial) before injecting.
- ✗ Don't use insulin that is past its expiration date. It is old and may not work well.
- ✓ Check the insulin bottle (vial) for particles or discolouration.
- ✗ If it does not look right don't use it.

Store insulin at room temperature (Between 15° - 25° Celsius not more!)

- ✓ It is safe to use for about a month.
- ✓ Keep it in a clean closed container.
- ✓ Keep it out of reach of children.
- ✓ Keep it in a cool dry place.
- ✗ Never keep it in direct sunlight or extreme heat- on the window sill, near the kettle, near the stove or fireplace, in the cubby in the car. Etc.

Store insulin in a working fridge

- ✓ It is safe to use for up to three months.
- ✓ Keep it in a clean closed container.
- ✓ Keep it out of reach of children.
- ✗ Never put it in a freezer or a fridge that freezes.
- ✗ Never put it in a fridge that does not work.

Needled Syringes and Equipment Safety

- ✓ Keep equipment in a clean closed container.
 - ✓ Put the cap on after use to keep it clean.
 - ✗ Never let the needle touch anything but clean skin and the top of the insulin bottle.
 - ✗ Never let anyone use a syringe you have used.
 - ✗ Never use someone else's syringe.
 - ✗ Do not clean the needle with alcohol. Alcohol removes the coating that helps the needle slide into the skin easily.
 - ✗ Do not reuse a needled syringe more than 5 times.
- If you are ill, have open wounds on your hands, or have poor resistance to infection,
- ✓ check with the doctor or nurse about reusing insulin syringes.

Disposal Safety Tips for USED needles, syringes and glucose strips

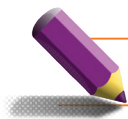
- ✗ Never throw needles or needled syringes into a rubbish bin or on a rubbish heap.
- ✓ Always put the cap back on the needle.
- ✓ Always put the needle or needled syringe in a waste container that is safe.
 - You can use the yellow bin or a heavy-duty plastic bottle with a screw cap.
- ✓ Only put medical waste in the container.
- ✓ Keep the waste container out of reach of children.
- ✓ Bring the waste container to the clinic for safe disposal.



BRIEF INTERVENTION: WHAT IS YOUR SAFE USE AND DISPOSAL PLAN?

Ask

- ? How can the medicines and equipment best be stored?
- ? How can they be kept safely?
- ? How the equipment will be disposed of?
- ? How can this be done safely?
- ? What are the challenges?
- ? What are the possible solutions?
- ? How confident are you that you can put this plan into practice?



TESTING BLOOD SUGAR LEVELS

When you inject insulin you have to check that your blood sugar levels do not go too high or too low. You will start injecting a certain amount - usually 10 units.

To get to the **right amount of insulin for you**, **YOU** have to **test your blood sugar** a number of times a day.

Goal 1: Test at least two times a day.

- ✓ In the morning, best before eating breakfast.
- ✓ In the day, 2 hours after a meal.

6

Goal 2: Test more than two times a day when

- ✓ your treatment is being adjusted
- ✓ you are sick
- ✓ you have hypoglycaemia
- ✓ you are pregnant
- ✓ you have hyperglycaemia

How to Use a Glucose Meter to Test Blood Sugar Levels

In this section you will learn **how to** use a glucose meter to test your blood sugar levels.

The word glucose is another way of saying sugar.

A glucose meter is a machine that you use to test the level of sugar in your blood.

Do you know?

Blood glucose = blood sugar

Glucose meter = sugar meter





The glucose meter you will use is called the On Call Plus **glucose meter**. This is what it looks like and what you will receive as a patient.

The On Call Plus System

The parts of the glucose meter

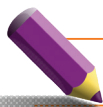


For the Patient

When you start insulin **you will get**

1. One glucose **meter**
2. One bottle of testing **strips**
3. One **code chip** (for each bottle of strips)
4. One **pricking device**
5. A pack of **6 finger prick needles**. (enough for 1 month)
6. One bottle of **Quality control solution**.

The **nurse, doctor and community health worker AND you** all have to know how to use **the glucose meter**.



1. Clinician Device Management

How to Put in the battery - Set the Glucose Machine - Do Quality Control

About

The glucose machine works with a **battery**. When the battery is in the **glucose machine** it **has to be set**.

When the battery is **taken out** the glucose machine has to be **set again to work** properly.

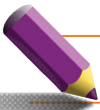


What to expect

The nurse or doctor or team leader will

1. **Put in the battery** in the beginning and each time the battery is changed.
2. **Set the settings** in the beginning and each time.
3. Do a **quality check**.
4. **Advise the patient to not remove** the battery.
5. **Encourage the patient to get help** (from the doctor, nurse, WBOT team leader, Dischem or Clicks) **if the machine does not start or work properly.**

When the battery goes flat you need to buy a new one at a pharmacy. You also need to get the glucose meter set again at the clinic or pharmacy. Do this as soon as you can to be sure your glucose meter is working properly all the time.



2. How to Test Your Own Blood Sugar Using the Glucose Machine

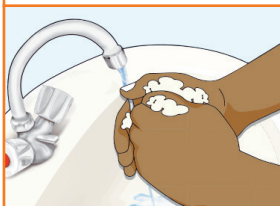
About

When the battery is in and the glucose machine is set, **it is time for you to do a blood sugar test** using the glucose machine.

What to expect

1. **Put in the CODE CHIP** in the machine every time you get a **new bottle of strips**
2. Wash your hands
3. Prepare the pricker
4. Put strip in the glucose meter
5. Prick your finger
6. Read the meter
7. Safely discard strips/prickers/needle
8. Store the glucose meter and equipment safely.

How You Prepare the Pricker (6 Steps)



1. Wash your hands before starting.



2. Unscrew the front part of the "pricker".



3. Remove the black "button" from the needle.



4. Screw the front part back on.



5. Select how deep you want the needle "prick". Adjust by the type of skin.
0 and 1.5 for delicate skin
2 and 3.5 for normal skin
4 and 5 for thick or calloused skin

Also: Pressure on the device against the finger increases the depth of the prick.



6. Load the pricker
 - Pull the back part of the pricker
 - The yellow button will appear.

The yellow button shows you it is loaded. **The pricker is now ready for you to use.**

You will get 5 needles each month. So you can use the pricker for about a week before changing the needle. **NEVER** share your pricker with someone else.



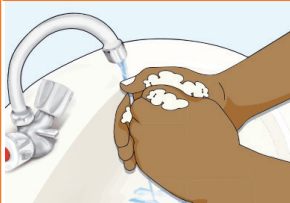
BRIEF INTERVENTION: PUTTING THE BATTERY IN, PREPARING THE PRICKER

As they demonstrate how they will put the battery in or prepare the pricker, help by asking questions like

- ✓ What is the task?
- ✓ What's going well?
- ✓ What's not working?
- ✓ What can you change (that you are doing)?
- ✓ What can you change about the way you feel about the task?

Find the learning need. Help patients find ways to solve their concerns. Build skills. Support them with information. Grow their self-confidence.

3. How To Do the Glucose Blood Sugar Test in 12 Steps



1. Wash your hands with soap and water



2. Massage your hand from the wrist up and finger pointing down.



3. Put the strip in the glucose meter. Make sure it is put in the right way.



4. Check the number that comes up. It must be the same as the code on the bottle of strips.


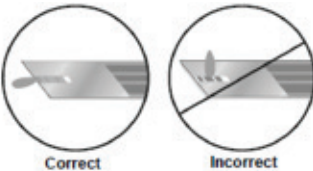





5. Put the prickers against your finger. Press on the yellow button.



6. Wipe away the first drop. **Do not use alcohol** to clean the area.



	 <p>Correct Incorrect</p>	
<p>7. Apply the second drop to the sample tip of the test strip.</p>	<p>8. Do not put blood or control solution on the top of the test strip.</p>	<p>9. The glucose meter will count off seconds.</p>
	<p>Your blood sugar results:</p> <p>Normal = above 4.0 and below 10.0 mmol/l</p> <p>High = above 33.3 mmol/l</p> <p>Low = below 1.1 mmol/l</p>	
<p>10. The glucose meter will show the number for your blood sugar.</p>	<p>11. Record the date, time, blood sugar results and time of your last meal in a diary or notebook.</p>	<p>To read previous measures press M. DO NOT PRESS the S</p>
<p>DO THE TEST AGAIN if your blood sugar number is high or low.</p> <p>High = above 33.3 mmol/l</p> <p>Or</p> <p>Low = below 1.1 mmol/l</p>		
<p>12. Take action if the test result is not normal</p> <p>High blood sugar = go to the nearest clinic or hospital (even after hours)</p> <p>Low blood sugar = control a hypo (see: Hypoglycaemia)</p>		



BRIEF INTERVENTIONS FOR USING A GLUCOSE MONITOR TO CHECK BLOOD SUGAR LEVELS

Start from the person.

- ? What's your experience with self-testing (for anything)?
- ? How do you feel about using the glucose monitor?
- ? How do you feel about YOU having to test your blood sugar?
- ? How confident are you that you will be able to test your own blood sugar?

Focus on the learning need.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained.
- ? **Abilities and Skills?** - e.g. understanding what the task is? Their strategies to achieving it, know how, making sense of numbers and words, etc.
- ? **Relationships with others?** - e.g. who to ask for help.
- ? **Sense of self and feelings?** - e.g. confidence using the glucose monitor; fear of getting things wrong, fear of needles; anxiety about results; feeling too old; low motivation.

Find solutions together.

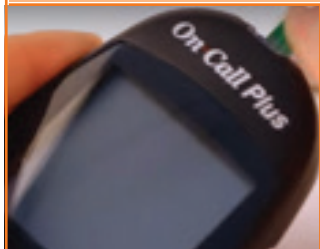
As they demonstrate how to do each task, help by asking questions like

- ✓ What would you say the task is?
- ✓ What's working?
- ✓ What's not working?
- ✓ What can you change (that you are doing)?
- ✓ What can you change about the way you feel about the task?

Help patients find ways to solve their concerns, build skills, support them with information and to grow their self-confidence.



4. How to Care and Store your Glucose Monitor and Materials.



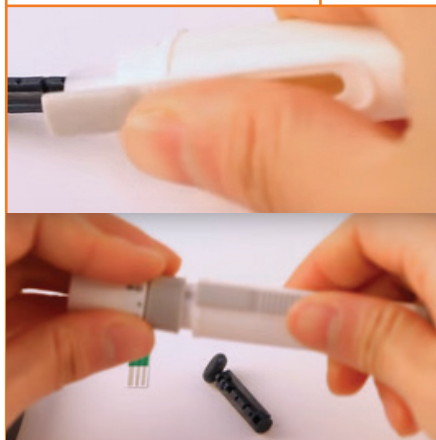
1. The machine will switch off on its own. This is to prevent the settings from changing.



2. Remove the strip and put it in your medical waste bin.



3. Unscrew the needle after you have used it 5 times.



4. Put the glucose meter and your testing equipment in a closed bag or box.



5. Eject the needle straight into your medical waste bin. Do not touch it.

6. Put a new needle in and screw the top of the pricker back on.

7. Keep your monitor and equipment.

- ✓ in a safe, cool dry place
- ✓ where you can get to easily.
- ✓ out of reach of children.

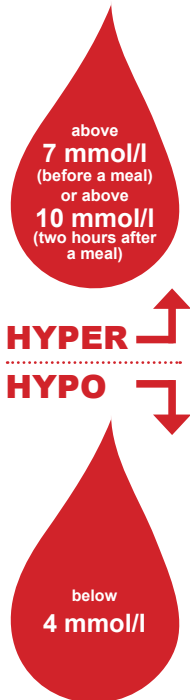
HYPERGLYCAEMIA AND HYPOGLYCAEMIA

Very high blood sugar is a sudden complication.

- This complication is called a **hyper**.
 - It happens because your blood sugar levels are above 7 mmol/l (before a meal) or above 10 mmol/l (two hours after a meal).
 - When your blood sugar levels are **very high** you can feel very thirsty, pass a lot of urine, become confused or even lose consciousness.
 - Very high blood sugar is called a hyper.
- 😊 **Check your blood sugar values** immediately if you have any of these symptoms.

Very low blood sugar is a sudden complication.

- This complication is called a **hypo**.
 - It happens usually because your blood sugar levels are below 4 mmol/l.
 - When your blood sugar levels are very low you can sweat, feel weak, have a fast heartbeat, feel hungry, feel dizzy or also become confused or lose consciousness.
- 😊 **Check your blood sugar values** immediately if you have any of these symptoms.



7



High blood sugar (HYPERglycaemia)

When you have diabetes it is common for the levels of sugar in your blood to go up and down throughout the day. This is because they are affected by things like:

- ☹ What you eat.
- ☹ How much you exercise.
- ☹ When you exercise.
- ☹ Where you inject your insulin.
- ☹ When you take your insulin injections.
- ☹ Illness.
- ☹ Stress.

You have to try and keep your blood sugar numbers within a range of between **4.0 mmol/l and 7.0 mmol/l (before breakfast) and from 5.0 mmol/l to 10.0 mmol/l** (two hours after eating). And you have to try to keep them this way for most of the time.

When your **blood sugar** levels are **above 7 (before breakfast) or 10 (after food)** they are **high**. Having high blood sugar levels is called **hyperglycemia (high blood sugar)**. When you have high glucose levels **often and for long periods of time** they seriously affect your health. They cause **complications (see Diabetic Complications)**. These problems happen without you even knowing it, especially if you do not go for your **A1c test (See Bs and Cs)**.

High blood sugar can happen over many hours or even over days. They usually happen

- ☹ When you eat **more carbohydrate** than your body and/or medicines can manage.
- ☹ When you are ill, have an **infection or injury**.
- ☹ When you **miss your insulin or diabetes medication**.
- ☹ When you take **other medicines** that affect your diabetes medication.
- ☹ When you are mentally or emotionally **stressed**.
- ☹ When you are **not doing enough exercise**.

Your nurse or doctor will **adjust your treatment** if your blood sugar levels are **higher than they should be** when you have been eating right and taking your medication right. If you are on insulin you will need to either increase the amount of insulin you inject or you will need to inject more often.

Recognize a hyper (when blood sugar is higher than it should be)

There are three main symptoms to look out for.

- ↑ You have to urinate more often than usual;
- ↑ You feel more thirsty than usual; and
- ↑ You feel hungry, even after eating.



Your Goal: Prevent Hypers!

You prevent hypers by taking control of your health.

- ✓ Check your blood sugar!
- ✓ Eat right!
- ✓ Exercise right!

The **biggest immediate danger** is when your **blood sugar** levels are **very high (15 and above)**. Very high levels can cause you to **become unconscious (coma)**.

If this happens

- ✓ Do a blood sugar test using your glucose meter.
- ✓ Take your medications as prescribed.
- ✓ Test your blood sugar test after 2 hours
- ✓ If your glucose test result is higher go to the clinic as soon as you can.



BRIEF INTERVENTION

1. Find out and talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

2. Focus on the learning need.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained more; the amount of information etc.;

- ? **Abilities and Skills?** - e.g. how to use the glucose meter; how to inject; how to eat right, exercise right, etc.
- ? **Relationships with others?** - e.g. who to tell; what to say; how much information to share; how family and friends will respond.
- ? **Sense of self and feelings?** - e.g. feeling anxious about having a hyper; taking ownership of the condition, confidence in their ability to be in charge and self-manage.

3. Find solutions together.

Explore the issues – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.

Low blood sugar (HYPOglycaemia)

It is common for the levels of sugar in your blood to go up and down throughout the day. This is because they are affected by things like:

- ☹ What you eat;
- ☹ How much you exercise;
- ☹ When you exercise;
- ☹ Where you inject your insulin;
- ☹ When you take your insulin injections;
- ☹ Illness; and
- ☹ Stress.



Your sugar levels can become very low. This can happen

- ☹ If you have more insulin than food in your system.
- ☹ If you miss a meal.
- ☹ If you take more exercise than normal.
- ☹ If you drink alcohol.

You should be ok as long as your blood sugar numbers stay within a range of above 4.0 mmol/l to below 7.0 mmol/l (before breakfast) and from above 5.0 mmol/l to 10.0 mmol/l or below (two hours after eating).

When your sugar levels drop **below 4 mmol/L** you are having a reaction **called hypoglycemia (low blood sugar)**. **Hypos** (short for hypoglycemia) are **more likely** to happen in people who are **injecting insulin** or are taking some types of diabetes pills (sulfonylureas).

Because **injecting insulin can cause hypos**, you need to know **how to recognize** when your blood **sugar levels drop too low**. **You** and the people around you also need to know what to do when you have a hypo.

Recognising a hypo.

Although having a hypo is very scary, you can catch and stop it. This is because there are hypo signs that warn you that your blood sugar is dropping dangerously low.

Signs of Hypoglycaemia

Moderate to serious signs	
Most common: <ul style="list-style-type: none">• Feeling shaky• Sweating• Feeling hungry• Having a fast heartbeat	Other feelings you may have: <ul style="list-style-type: none">• Being nervous or anxious• Irritability or impatience• Feeling lightheaded or dizzy• Nausea• Color draining from the skin (pallor)• Feeling Sleepy• Feeling weak or having no energy• Tingling or numbness in the lips, tongue, or cheeks• Severe signs• Confusion• Convulsions or Seizures• Coma

Severe signs	
<ul style="list-style-type: none">• Tingling or numbness in the lips, tongue, or cheeks	<ul style="list-style-type: none">• Confusion• Convulsions or Seizures• Coma



BRIEF INTERVENTION – NOTICING CHANGES IN YOUR BODY?

What's your experience with changes in your levels of blood sugar?

Ask questions like

What did you notice? How did the change make you feel? What did you think caused it to happen. What did you do or think of doing?

Discuss what can be learnt from experience? Focus on the learning need.

Things like different signs and different reactions; the importance of noting the changes in their own bodies so that they can know them and tell others.

Hypos happen very quickly.

If you experience **moderate to serious signs** of hypoglycemia, **immediately check your blood sugar** on your glucose meter.



How YOU Treat Moderate to Serious Hypoglycemia

If your blood sugar is below 4 mmol/l

Step 1. Immediately take about 3 super Cs or tea with 3 teaspoons of sugar or half a cup of a fizzy drink (like Coke or Fanta) (not diet). This will help raise your blood sugar levels.

Step 2. After 15 minutes check your blood glucose.

If it is still below 4 mmol/l

Repeat Step 1 (eat) and Step 2 (test 15 minutes after eating) until your blood sugar level is normal.

Step 3: When your blood sugar is above **4 mmol/l** have a snack. Eat a slice of bread or a piece of fruit to make sure it does not go low again.

Once your blood glucose is back to normal, eat a meal or snack to make sure it doesn't lower again.

How To Treat Severe Hypoglycaemia

A **severe hypo** is when you experience confusion, seizures or coma. These are very serious signs of hypoglycemia.

You need **immediate medical help** from a **health care professional**.

You must **prepare for an emergency so you can** get the help you need **when you can't help yourself**. Make sure your **family, friends and colleagues** know **what to do** and **what not to do** if you have a **severe hypo**.

1. Put emergency numbers in a visible place at home.
2. Put an **ICE** (in case of emergency) **number** on your cell phone.
3. Carry something in your purse or wallet to let people know you have diabetes.

Do you know? A Severe Hypo is an Emergency.

- ✓ Call emergency services - 10177 (or 012 310 6200)
- ✓ You need to get to a clinic or hospital as soon as possible.
- ✓ For a private ambulance call - 086 133 2332 (fee involved)
- ✗ Do not put anything into the person's mouth. Food or fluid can make them choke.
- ✗ Do not inject them with insulin. It will lower their insulin even more!

Hypos at night

Your sugar levels may go **low at night** because that is **when you inject insulin**.

Some **signs of low sugar levels at night** are:

- ✗ Bad dreams.
- ✗ Restless sleep.
- ✗ Waking up in the night very hungry.
- ✗ Have high blood glucose in the morning.

To **prevent a hypo at night** make sure you never miss supper AND have a **snack around 21:00** before you go to sleep.

Snacks at bedtime

- 3 provitas or 1 slice low GI brown bread with 1 tbsp low fat margarine or 1/2tbsp peanut butter. or
- ½ cup low fat milk. or
- ¼ cup low fat yoghurt. or
- Some of the food you ate at supper

Remember: Tell your nurse or doctor if you have signs of low sugar at night even though you took a snack.



BRIEF INTERVENTION

1. Find out and talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

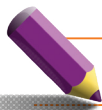
2. Focus on the learning need.

Are they talking about

- ? **Knowledge?** - e.g. things that need to be explained more; the amount of information etc.;
- ? **Abilities and Skills?** - e.g. how to use the glucose meter; how to inject; how to follow the 15 15 rule; how to do the tables; what the words mean, etc.
- ? **Relationships with others?** - e.g. who to tell; what to say; how much information to share; how family and friends will respond.
- ? **Sense of self and feelings?** - e.g. feeling anxious about having a hypo; confidence to recognize a hypo; being able to manage a hypo; remembering everything.

3. Find solutions together.

Explore the issues – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.



CHRONIC COMPLICATIONS

What are diabetic complications?

Diabetes can damage any part of the body and cause health problems. This is because it affects the blood vessels and nerves in ALL parts of your body. Diabetes also affects the immune system, making it harder for you to fight off infections. Health problems caused by diabetes are called diabetic complications.

Complications can happen at any time. Some happen suddenly. Sudden complications usually happen when your blood sugar levels become very high or very low. You learned about these in the previous section on hyperglycaemia and hypoglycaemia (pages 33–40). Some complications happen over time. These are called chronic complications.

Many complications take time to occur because diabetes damages blood vessels and nerves over years. We may not notice the way they are affecting our bodies. Or we may notice a sudden change, even though the damage has happened slowly. These kinds of complications are called **chronic complications**.

Do you know? Sudden complications can lead to chronic complications.

Which parts of the body are more likely to be affected by chronic complications?

Diabetes can damage any part of the body over time because it affects the nerves and the circulation of blood. But usually there are 7 parts of your body that are most often affected by diabetes.



1. Your eyes.

- ☺ Diabetes can cause eye problems like blurry vision, cataracts, glaucoma and retinopathy.

COMMON EYE PROBLEMS WITH DIABETES		
Problem	Cause and effect	Action
Sudden blurry vision	Develops quickly	Get blood sugar under control
	Sudden blurry vision	Get help
	Reason- high blood sugar levels	Keep blood sugar right
	May be temporary -but takes time to get normal vision	Go for regular Eye Checkup
Cataracts	Develops slowly	Check blood sugar levels
	Cloudy lens makes vision more and more blurry	Go for regular Eye Checkup
	Reason in diabetes -high blood sugar levels	Keep blood sugar right
	Causes blindness	Get treated
Glaucoma	Develops slowly	Keep blood sugar right
	No symptoms	Go for regular Eye Checkup
	Reason - nerve and vessel damage increases pressure in the eye	Keep blood sugar right
	Causes loss of vision	Get treated – eye drops, medicines, surgery
Retinopathy	Develops slowly	Check blood sugar levels
	Affects the retina, the part that makes light into images	Go for regular Eye Checkup
	Reason- nerve and vessel damage from high blood sugar	Keep blood sugar right
	Causes blindness	Get treated

- ☺ These complications can lead to loss of vision and even blindness.



Your Goal: Get your blood sugar levels under control. Have an eye check-up every year.

2. Your mouth.

Diabetes can cause pain, infection and other problems in your mouth. When your blood sugar is not well controlled it leads to some common complications.

- ☹ Gum disease.
 - Red, swollen and painful gums.
 - Loose teeth
 - Discharge (pus)
- ☹ Fungal infection - inside your cheeks, on your tongue, on the roof and at the corners of your mouth.
- ☹ Tooth decay - dark spots or holes in your teeth.
- ☹ Dry mouth.
- ☹ Oral burning - a burning sensation inside your mouth that gets worse over the day.
- ☹ Bad breathe that does not go away.
- ☹ Change in taste or a bitter taste.

These complications can make it harder for you to control your blood sugar levels.



Your Goal: Keep your blood sugar levels under control. Brush your teeth two times a day. See a dentist every six months. Don't smoke.

3. Your feet (and hands).

- ☹ Diabetes damages the nerves to your feet and hands.
- ☹ Diabetes can cause pins and needles, sharp stabbing pains or feeling numb.
- ☹ When you lose feeling in your feet you can hurt yourself without noticing the injury.
- ☹ Diabetes can cause you to get fungal infections between your toes and fingers and under your nails.
- ☹ Diabetes can cause you to get bacterial infections and sores especially on feet.
- ☹ Poor care of cuts and infections on your feet can lead to foot ulcers and even amputation.



Your Goal: Check your feet every day. Follow "The Golden Rules of Good Foot Care". Keep your blood sugar levels under control.

4. Your skin

- ☹ Diabetes makes your skin dry.
- ☹ Dry skin makes it easy to get rashes and sores.
- ☹ Diabetes causes rashes, cuts, burns and sores to heal slowly.



Your Goal: Keep your blood sugar levels under control. Take proper care of wounds, cuts or any other injuries.

5. Your kidneys.

- ☹ Diabetes can cause kidney disease. It damages your kidneys so that they can't clean your blood. This happens very slowly.
- ☹ When your kidneys don't work it affects your blood pressure, because there is nothing to control the amount of fluid and salts in your body.
- ☹ When you have kidney disease your body can't get rid of waste products in your blood and you can become very ill.



Your Goal: Control your blood sugar levels and go for a kidney test once a year.

6. Your brain, heart and legs.

- ☹ Diabetes can cause a stroke. This happens when high blood pressure blocks the blood vessels to the brain.
- ☹ Diabetes causes heart disease and can cause a heart attack when the blood struggles to get to the heart.
- ☹ Diabetes causes pain to the legs and can lead to black toes and feet when the blood can't get to your feet.



Your Goal: Control of your blood sugar levels.

7. Your sexual functioning.

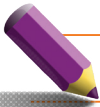
- ☹ Diabetes can cause sexual problems for both men and women. This is because high sugar levels damage blood vessels and nerves affecting the blood flow to your sexual organs.
- ☹ Women can lose sensation.
- ☹ Men can have difficulties getting or keeping an erection.

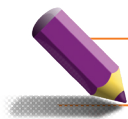
- ☹ Men and women are also more at risk of getting thrush, as well as of bacterial infection in their urinary tract (UTIs) . This is because high blood sugar levels make it easy to get infections.



Your Goal: Control your blood sugar levels. Get treatment for any infection, including STIs.

Do you know? The best solution is to get on top of your **4Bs and 4Cs** to prevent sudden or chronic complications. This way you control the complication. AND you prevent yourself from getting others. Remember- one complication puts you at risk of getting others.





CONTROLLING DIABETES

Know your Bs and Cs

There are four “Bs” and four “Cs” that help you control your diabetes when you use insulin.

The “Bs” are the things **YOU CAN DO** to **control** your blood sugar levels.

**B1**

Blood sugar control

**B3**

Blood cholesterol (LDL) control

**B2**

Blood pressure control

**B4**

Breathe Air
Don't Smoke

The “Cs” are what you need the **CLINIC TO CHECK** to help you **control your diabetes**.

**C1**

Check eyes

**C3**

Check kidneys

**C2**

Check teeth and mouth

**C4**

Check feet

B1.Blood sugar control.

Knowing and controlling the level of sugar in your blood helps YOU MANAGE your diabetes.

- ✓ It helps you keep an eye on changes in your sugar levels while you do day-to-day things.
- ✓ It helps you know when your sugar levels are going too low (hypo).
- ✓ It helps you work out what to eat.
- ✓ It helps you know when your sugar levels are going too high (hyper).
- ✓ It helps you know when to take insulin.
- ✓ It helps you work out how much insulin to take.
- ✓ It helps you work out when to exercise and when to stop.

The level of sugar in your blood tells you how much is there. To know how much sugar is in your blood at any one time you have to measure it.



Remember: Your sugar levels change all the time. So, when you inject insulin you need to measure your blood sugar levels once or several times a day. The doctor or nurse will tell you how often and when to inject.

Measuring your blood sugar levels

A glucose meter and doing an A1c test are two ways to measure your blood sugar levels.

The glucose meter helps you control your blood sugar levels from day to day.

The A1c test helps check if your sugar levels are staying within range over the last 3 months. Also, it can be used to adjust diabetes medicines and to support better eating and exercise plans.

Glucose meter.

You measure your blood sugar levels with your glucose meter. Glucose is another word for sugar. The numbers on the glucose meter tells you the amount of sugar in your blood. They tell you if your sugar is in control, too high or too low. Learning what the numbers mean helps YOU take control of your diabetes. Use them to guide your actions.

Right numbers for good control.

Before your first meal in the morning (breakfast) your glucose meter should show any number or part of a number between 4 and 7. For example 4.0 or 6.9.

Two hours after eating any food your glucose meter should show any number or part of a number between 5 and 10 or 10. For example 6.0 or 8.2.

As you can see there is more than one right number. Also, the right numbers depend on when you test.

Warning numbers

When your glucose meter shows a number above the highest right number your blood sugar levels are too high (e.g. 8.5 before breakfast or 10.7 after food). This is called hyperglycemia (or Hyper). The tablets and insulin are the medicines that prevent you from having a hyper.

When your glucose meter shows any number below 4.0 (e.g. 3.8) your blood sugar levels are too low. This is called Hypo). You have to eat or drink something sweet to treat a Hypo.



Your Goals: Use your glucose meter to keep your numbers good all day every day.

1. Check your numbers usually two or three times a day
2. Prevent hypos.
3. Prevent hypers.

The A1c Blood Test.

The A1c test is a blood test to measure the average level of blood sugar over the past 3 months. The test does not measure day-to-day changes in sugar levels. Sometimes the test is called HbA1c

What A1c stands for.

A1c is a form of hemoglobin. Hemoglobin is the protein that makes your blood red. Its job is to carry oxygen throughout your body. When the sugar level is high it sticks to the hemoglobin and this is what we measure when we do an A1c test.

How The Test Works

1. You give a sample of your blood to the healthcare provider.
2. Your blood sample is sent to the lab for an A1c test.
3. Your test results are sent back to the healthcare provider.
4. You and the healthcare provider meet to talk about your results.
5. You plan together to manage your blood sugar.

What the A1c Test Results Mean

The A1c test result shows the percentage (%) of sugar attached to hemoglobin in the blood over the last 3 months. Your blood sugar level can change every few minutes but the A1c tells us if your blood sugar has been high or controlled over the last 3 month period.

- ✓ For most people with diabetes the A1c level should be less or equal to 7% to keep blood sugar under control.
- ✗ The higher the A1c, the greater your risk of having diabetes complications.



Your Goal: Do the A1c test to plan and manage your diabetes.

1. Keep your A1c test result at 7% or below (for most patients)
2. Take an A1c test at least once a year. Test more often if your treatment has been changed.
3. Use your A1c test result to be in charge.



BRIEF INTERVENTION

- ? Find out and talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

Relate what you are told about the dimensions of the person.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained more; the amount of information etc.;
- ? **Abilities and skills?** - e.g. how to use the glucose meter; how to inject; how to understand the numbers; reading; what the words mean, etc.
- ? **Relationships with others?** - e.g. who to tell; what to say; how much information to share; how family and friends will react to testing and injecting in front of them.
- ? **Sense of self and feelings?** - e.g. confidence to test often; being able to inject on time; thinking of blood test results like “pass” and “fail” rather than guides to help take control.

Find solutions together.

Explore the issues – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.



B2.Blood pressure control

The heart and blood vessels work as one system. The heart is the pump. The blood vessels are the pipes. The heart pushes blood through the blood vessels to every part of your body. In medicine it is called the cardiovascular system.

Blood pressure is the force that blood puts on the walls of blood vessels as it moves around the body. There is always some pressure on the walls of blood vessels, but when the heart contracts and pushes blood through the blood vessels there is more force. Then, when the heart relaxes, there is less force.

Blood pressure changes all the time. This is because your heart has to respond to what is happening to you. It adjusts to many things, including:

- ✓ What you are doing (if you are awake, asleep, physically active, doing exercise, resting etc.).
- ✓ How you are feeling (if you are well, sick, happy, sad, angry, anxious).
- ✓ Your posture (how you stand, sit or lie).
- ✓ Your age.
- ✓ Your sex.
- ✓ Your body temperature (if you are feeling hot or cold)
- ✓ Your height.
- ✓ Your medications.

What this means is that blood pressure is a range, not a number.

Blood pressure can be measured.

ADULT BLOOD PRESSURE CHART:								
Top number/ systolic pressure	190				Emergency			
	180							
	170	HIGH		Hypertension				
	160							
	150							
	140	RISK						
	130							
	120							
	110	IDEAL						
	100							
	90							
	80	LOW						
	70							
mmHg		40	50	60	70	80	90	100
Bottom number/ Diastolic Pressure								

The way to know if a person's blood pressure is high or low is to measure it. The units used to **measure** blood pressure are millimetres of mercury (written mmHg). Two numbers are needed to measure the level of pressure on your blood vessels. One number measures the pressure when your heart pumps the blood. This pressure is called **systolic pressure**. This number is written first, as **120/80** for example. The other number measures pressure when your heart rests between beats. This pressure is called **diastolic pressure**. This number is written second, as **120/80**, for example. You read or say these numbers as 120 over 80, for example.

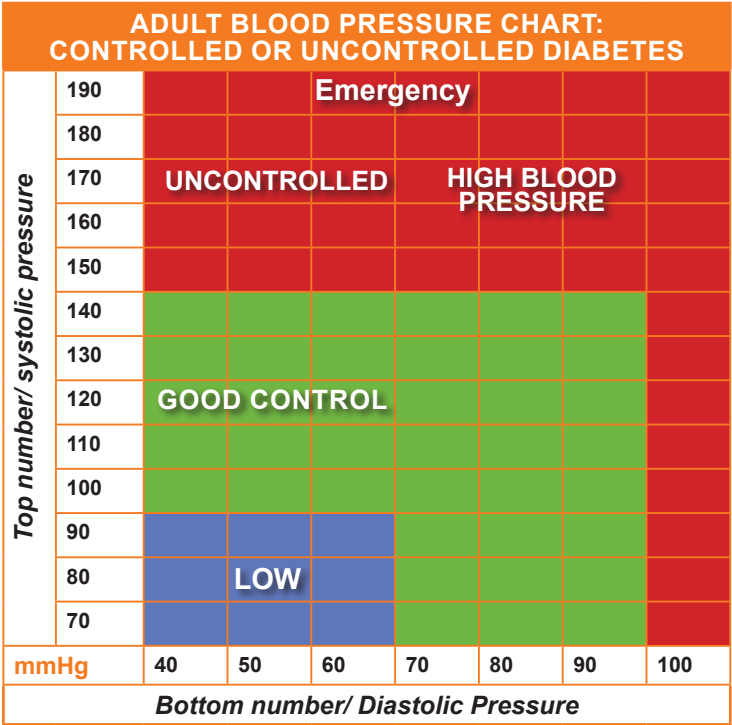
Now it is important to understand what these numbers mean.

Right numbers for good control.

Ideal blood pressure for a person who is not diagnosed with diabetes should be **at or below 120 over 80 mmHg**. It shows he or she **does not have** a high blood pressure problem.

When the numbers are above 140/90 you have high blood pressure. You will then get **tablets to bring these numbers down**. You have **good control** if your blood pressure is at or below 140 over 90 mmHg.

BUT if you have kidney problems your blood pressure needs to be **at or lower than 130 over 80 mmHg**.



Your blood pressure is measured using a **blood pressure machine**.

Controlling Blood Pressure

When you have diabetes and high blood pressure:

1. You usually need to take **1-3 blood pressure tablets every day**.
 - Your doctor will usually prescribe medicines like HCTZ (hydrochlorothiazide or Ridaq), amlodipine (Amloc) or enalapril (Envas or Pharmapress)
 - These medicines are also used to treat heart and kidney disease.
2. You need to eat right and exercise right;
3. You need to keep control of your blood sugar.



Your Goal: Keep good control of your blood pressure.

1. Get your blood pressure checked every time you go for healthcare.
2. Know your own numbers.
3. Take your blood pressure medicines.
4. Eat right, exercise right, control your blood sugar.
5. Get support



BRIEF INTERVENTION

1. Find out or talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

2. Relate what is said to the dimensions of the person.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained more; the amount of information etc.;
- ? **Abilities and skills?** - e.g. how to read the table; how to remember to take the tablets on time every day; knowing what to do when there is a problem.
- ? **Relationships with others?** - e.g. who to tell, what to say, how much information to share with family members or friends; how will other they react.
- ? **Sense of self and feelings?** - e.g. confidence about being able to keep BP under control; worries about what to do with the information; feeling overwhelmed.

3. Find solutions together.

- ✓ **Explore the issues** – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.

B3.Blood Cholesterol Control

Your body needs fats to keep healthy. **Cholesterol is one of the fats** that your body makes and gets from food. There are two kinds of cholesterol in your blood-HDL and LDL. HDL is the good cholesterol. **LDL is the bad cholesterol** because when it is **high, it causes less blood to flow** to all parts of your body. **High LDL** clogs, tears or blocks your blood vessels. It can cause chest pain (angina), heart attacks, stroke and poor circulation to your legs and feet.

Just like with blood pressure and blood sugar there is a test to find out about your cholesterol.

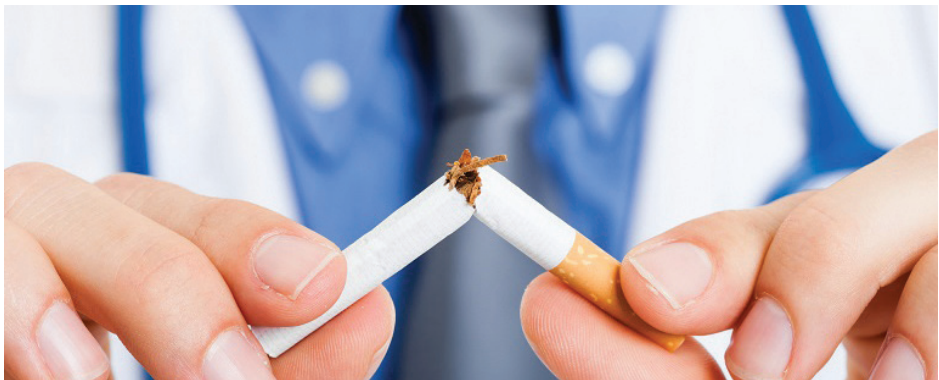
To do the total cholesterol test or just the bad LDL cholesterol test, blood is taken from your vein by a healthcare professional and sent to a laboratory (lab). Usually this test can be done with the same blood that was drawn for the A1c blood sugar test.

1. For most people with diabetes on tablet treatment the goal is to have a **LDL cholesterol level of below 1.8 mmol (or a total cholesterol of below 4.5)**
2. **All patients** with diabetes who are **40 years or older** will be started on treatment for cholesterol. Usually the medicine is simvastatin (simvotin).



Your Goal: Keep good control of your cholesterol .

1. Test for LDL Cholesterol once a year, more often if your cholesterol treatment changes
2. Know your own numbers.
3. Take all your medicines.
4. Eat right, exercise right, control your blood sugar.
5. Get support



Do you know your numbers?	
Blood sugar before breakfast	4 to 7
Blood sugar 2 hours after a meal	5-10
Blood A1c test	Below 7
Blood pressure	Below 140/90
Blood pressure with kidney problems	Below 130/80
Blood LDL cholesterol	Below 1.8
Blood Total Cholesterol	Below 4.5

B4.Breathe - Air, Don't Smoke

Smoking causes heart and lung disease. Diabetes causes heart and lung disease. So when you smoke AND have diabetes your chances for getting a stroke or heart attack are much much higher! And it puts you at much higher risk of getting other complications like

- ⊗ kidney disease;
- ⊗ poor circulation leading to infections, ulcers, blood clots, or amputations;
- ⊗ sexual dysfunction; and
- ⊗ nerve damage that leads to pain, tingling, and difficulty walking.

Some people with diabetes smoke because they are in poor health. They often don't manage their diabetes well. They don't pay enough attention to their sugar. They don't exercise or follow a good eating plan. They do not do enough A1c tests, foot checks and dental check-ups. They also don't get help from friends or family. They feel depressed. They feel out of control. It becomes a vicious circle.

Do you know? When a person has diabetes there is no amount of smoking that is ok.

When you smoke, you lose more and more control over the disease. At the same time smoking makes diabetes get worse.

You can take back control. This happens when you accept

- ☺ You can't change the fact you have diabetes.
- ☺ You can change the fact that you smoke.



Even when people are aware of the extra dangers of smoking with diabetes they still continue to smoke . This is because smoking is a habit and nicotine in cigarettes is addictive.

But, when a person makes the decision to stop smoking they have to find ways to break the habit.

7 Tips to help you stop smoking.

1. Decide on a start: choose a day and set a goal
2. Delay: Delay smoking for a few minutes when you feel you need to have a cigarette.
3. Deep breathe: Breathe slowly and deeply. Focus on how you are making your health better.
4. Do something else: talk to someone, listen to music, do exercise.
5. Drink water: have a snack, check your sugar.
6. Don't be around smoke or smokers: Ask people not to smoke around you. Avoid places where people smoke.
7. Do ask for help. Tell your healthcare worker. Talk to your family or friends.



BRIEF INTERVENTION

1. Find out or talk about confidence and worries.

Ask questions like:

- ? What do think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

2. Relate what is said to the dimensions of the person.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained more ; the amount of information etc.;
- ? **Abilities and skills?** - e.g. knowing what to do to quit smoking, knowing what to do to get better control over diabetes; knowing what to do when there is a problem.
- ? **Relationships with others?** - e.g. who to tell, what to say, how much information to share with family members or friends; how will they react.
- ? **Sense of self and feelings?** - e.g. confidence about being able to stop smoking; worries not being able to manage anxiety; worries about motivation; feeling overwhelmed.

3. Find solutions together.

- ✓ **Explore the issues** – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.

The 4 Checks

The 4 Cs are the things YOU must get CHECKED at the CLINIC.

C 1. Check Eyes

Diabetes causes a number of eye complications, like blurry vision, cataracts, glaucoma and retinopathy. These changes to your eyes often happen slowly. You may think that they are just part of getting old. Or you may not notice them before the damage is done.



Prevent eye complications.

- ✓ Have an eye Check-up every year.
- ✓ Have an eye Check if you notice any change in your vision or your eyes.
- ✓ Make sure your blood sugar and blood pressure are controlled.

C 2. Check Teeth and Mouth

Preventing problems with your teeth and mouth is a very important part of how you take control of your diabetes. High blood sugar causes gum disease, tooth decay, dry mouth as well as painful sores and infections that are hard to heal. These complications make it more difficult for you to control your blood sugar. They will not go away on their own.



Prevent mouth and dental complications.

- ✓ Go to the dentist for Check-up every year.
- ✓ Go to the dentist if you have any toothache or painful gums. Brush your teeth two times every day.
- ✓ Make sure your blood sugar and blood pressure are controlled.

C 3. Check Kidneys.

Diabetes damages the blood vessels in your kidneys. This injury happens slowly over a period of time. Also, you can't feel if diabetes has harmed your kidneys. The only way for you to know if you have kidney damage is to go to the doctor and do a urine and a blood test.

Keep your kidneys as healthy as possible. If diabetic kidney disease is not treated early, it can lead to kidney failure. Once your kidneys are damaged by diabetes they cannot be fixed.



Prevent kidney disease:

- ✓ Have a kidney check-up at the doctor once a year.
- ✓ Avoid any medicines that damage the kidneys (especially over-the-counter pain medications).
- ✓ Make sure your blood sugar and blood pressure are controlled.

C 4. Check Feet (and legs).

Diabetes damages the blood vessels and nerves to your feet and legs. It causes pain and cramps in your legs as well as numbness and tingling in your feet. It can also lead to serious problems with ALL the nerves in **all parts of your body**. Injury happens slowly, over time. It is caused by poorly controlled blood sugar.

Catch damage to your feet and legs early. It can help prevent serious complications as well as lower leg amputations.

Foot ulcers are among the most serious problems of living with diabetes. These are sores on the feet that do not heal and may lead to amputation (where part of the foot or leg has to be removed). The nurse or doctor at the clinic needs to examine your feet with socks and shoes off. He or she will look at the skin and bones and will test the blood supply and nerves in your feet.



Prevent injury to your feet and legs.

- ✓ Go for a foot check-up once a year. If you have nerve damage to the feet or have had a foot ulcer or amputation show a healthcare worker your feet at every visit.
- ✓ Follow ‘the Golden rules of Good Foot Care’.
- ✓ Make sure your blood sugar and blood pressure are controlled.

Don't Forget: Ask the doctor or nurse about the 4 C's at every visit!





BRIEF INTERVENTION – 4 “C”S

1. Find out or talk about confidence and worries.

Ask questions like:

- ? What do think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

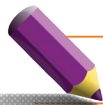
2. Relate what is said to the dimensions of the person.

Is the person talking about

- ? **Knowledge?** - e.g. things that need to be explained more; knowing that the Cs are additional to self-care etc.;
- ? **Abilities and Skills?** - e.g. keeping a calendar; knowing what to ask; knowing how to remember what to say or what is said; knowing what to do when there is a problem.
- ? **Relationships with others?** - e.g. having to explain the reasons for the checkups; how much information to share with the doctor or clinician; costs; who will accompany them.
- ? **Sense of self and feelings?** - e.g. confidence to ask for the check-ups; not feeling motivated.

4. Find solutions together.

- ✓ Explore the issues – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.



GOOD FOOT CARE TIPS

THE GOLDEN RULES OF GOOD FOOT CARE

1. Check your feet every day.

- ✓ If you can't lift your feet use a mirror or ask someone to look for you.
- ✓ Look for cuts, cracks, bruises, blisters, sores, infections, unusual markings.

2. Check the colour of your legs and feet.

- ✓ Get help if there is swelling.
- ✓ Get help if there are warm patches.
- ✓ Get help if there is redness.

3. Keep your feet clean.

- ✓ Wash your feet every day
- ✓ Dry carefully between each toe
- ✓ Pick up problems early.

4. Do not ignore cuts and scratches.

- ✗ They can become infected.
- ✗ They will take longer to heal.
- ✓ Clean any cuts and scratches
 - use mild soap and water;
 - cover with a plaster or dry dressing.

5. Check corns and callouses.

- ✗ Don't cut them.
- ✗ Don't treat them over-the-counter medicines.
- ✓ Go see your doctor or a foot care specialist.

6. Take good care of your toenails.

- ✓ Cut your toenails straight across.
- ✗ Do not self-treat in-growing toenails or slivers.
- ✗ Don't use a razor or scissors.
- ✓ Go see your doctor or a foot care specialist

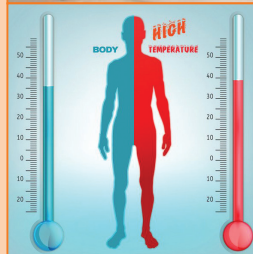
7. Put skin lotion only on your heels and the soles of your feet every day.

- ✗ Do not use lotion between your toes.
- ✓ Wipe off excess.



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- ✗ Do not wear TIGHT socks, garters or elastics or knee highs.
- 9. Do not put your feet and legs IN, ON or NEAR anything hot**
- ✗ Do not use a hot water bottle.
 - ✗ Do not use an electric blanket.
 - ✗ Do not put them close to a fire or on a heater.
 - ✓ Wear warm socks and closed shoes.
- 10. Wear shoes inside and outside your house.**
- ✓ Wear shoes that fit well
 - ✓ Wear shoes that support your feet.
 - ✓ Wear low heels.
 - ✓ Shake out shoes before putting them on.
 - ✓ Buy new shoes in the late afternoon.
- 11. Do not sit for long periods.**
- ✗ Do not cross your legs.
 - ✓ Stand up and walk around as often you can.
- 12. Avoid extreme cold and heat (including the sun).**
- ✗ Do not wash with very hot water or take hot baths.
 - ✗ Do not use your feet to test the water temperature.
 - ✓ Check the water temperature with your elbow.
- 13. Do not smoke or breathe in smoke**
- ✗ Smoking cuts the amount of oxygen in your blood.
 - ✗ Smoking makes blood circulation worse.
- 14. Look after your feet and legs when you exercise**
- ✓ Wear proper shoes.
 - ✓ Check for cuts, sores and blisters.
- 15. Get the right advice and treatment for your feet.**
- ✓ Get your feet checked by a foot care specialist at least once a year.
 - ✓ Get your feet checked every time you have a clinic visit.
 - ✗ Don't ignore any problem.



EXERCISE

Diabetes is a modifiable non-communicable disease. This means that people can do things to change how it affects them. One thing that everyone can do is **exercise**.

In this section we are going to talk about exercising.

What is exercise?

Exercise is physical activity. It is planned. It is structured. And it is repeated regularly. The aim of exercise is to improve health and well-being.

Let's break this definition down.

Can you think of examples of physical activity?

That was easy.

The next part of what exercise means is that it is planned physical activity. Let's use the example of walking to the shop. Would you say walking to the shop is exercise?

You probably would say yes, but in fact it may just be physical activity. Why? Well, the purpose of going to the shop is to buy something. Walking is one way to get there. So it is physical activity. But it is not exercise, unless the purpose of going to the shop is also to exercise. Then, when you walk, you walk **fast enough** to increase your heart rate. You make sure that the walk is **far enough** so that you do physical activity for **long enough**. And walk for exercise like this **often enough**.

Let's do an exercise self-check.

1. Do you do planned physical activities?
2. Do you do physical activities in order to improve your health?
3. Do you structure your physical activities?
4. Do you do planned physical activities 3 or more times a week?

You can see from your answers if your physical activities count as exercise.

Why exercise? Exercise makes it easier to control your blood sugar levels. When you exercise, your muscles get the food they need and your blood sugar level goes down.



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Changing physical activity into exercise.

You are not exercising if you answered “no” to all or most of the exercise self-check questions. But you can change this.

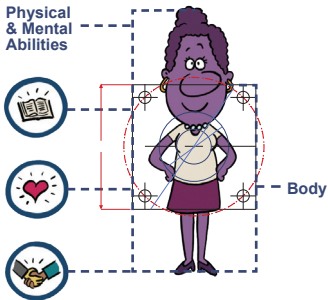
Do you know? When you exercise always tell people you have diabetes. Because diabetes affects your blood sugar levels, ALWAYS tell somebody you are exercising.

Your Dimensions as a Person

The things that you do and know, come from 4 sources

- 1. Your physical and mental abilities.
- 2. Your knowledge and beliefs.
- 3. Your sense of self - how you feel about yourself, who you are and what you can do.
- 4. Your relationships with other people, things and the environment.

Dimensions of a person.



So how can you change? The first thing you need to work out is what influences how you think about or respond to exercise.



Think about the answers you gave to the exercise self-check. Now see if you agree or disagree with these statements.

Exercise Self-check

	Statement	Agree	Disagree
A	I find it hard physically to exercise.		
	I am not fit.		
	I have pain in my chest		
	I feel dizzy		
	I feel faint		
	I am very short of breath		
	I feel too tired to exercise.		

K	I don't know how to exercise.		
	I am too old to exercise.		
	I am afraid I will get hurt.		
	I am afraid for my sugar.		
	I don't have time to exercise.		
	I don't have money to exercise.		
S	I don't feel comfortable doing exercise.		
	I don't feel confident I can exercise		
	I want to exercise but have not started yet		
	I started exercising but just don't seem to stick to it		
	I don't like to exercise		
R	I don't have anyone to exercise with me.		
	There is no safe place to exercise where I live.		
	I have too many responsibilities at home		

From what you are saying, it seems that we can work together to help you exercise.



BRIEF INTERVENTION: EXERCISE

1. Review the responses and talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

2. Find the learning need. Focus on the dimensions (K-A-R-S) that the person sees as preventing them from exercising. Are they talking about

- ? K - *Knowledge?*
- ? A - *Abilities and skills?*
- ? R - *Relationships with others?*
- ? S - *Sense of self and feelings?*

3. Find solutions together.

- ✓ Share information.
- ✓ Provide practical support.
- ✓ Ask the person how he or she can overcome the challenge.
- ✓ Get advice or support for the person.

Do you know? A person **MUST NOT** exercise if he or she

- Has chest pain
- Feels dizzy or faint
- Has severe shortness of breath
- Has a resting blood pressure of systolic >180mmHg and/ or diastolic >110mmHg.



Your Goal: Exercise Right to Manage Diabetes

Now that we have talked about this, lets review.

1. On a scale of 1-10, where 1 is not important and 10 is very important how **important** is it to you to change your exercise habits?

NOT IMPORTANT - VERY IMPORTANT ✓

1	2	3	4	5	6	7	8	9	10

2. On a scale of 1-10, where 1 is not confident and 10 is very confident how **confident** are you that you can successfully change your exercising habit or behaviour?

NOT CONFIDENT - VERY CONFIDENT ✓

1	2	3	4	5	6	7	8	9	10

3. How **realistic** is it that you can successfully change your exercise habits?

UNREALISTIC




UNSURE

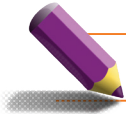
REALISTIC








NOW you know where you are at, **make your plan to ACT.**

When you exercise you need an exercise plan. It helps you start exercising. It helps you keep exercising. Most of all it helps you set and get to your goal.

There are many different ways to exercise. Here is an example of an exercise plan. It shows different kinds of activities. It shows you how long do each activity. And it shows you how to get to your goals.It is always best to choose to do activities that suit you.

Getting started		Getting started	Building me	Getting fitter	My Goal
		Minutes I Need to do the Activity			
Walking and stepping		Week 1-3	Week 4-8	Week 9-12	Week 13 onwards
	Brisk walking. It makes your heart rate increase and you breathe faster.	10 mins	15 mins	25 mins	30-40 mins
	Step-up and down.	2 mins	3 mins	5 mins	5 mins
	Walk up and down stairs. No stairs? Ok - just walk for the amount of minutes.	3 mins	4 mins	5 mins	6 mins



Push ups (ground) or Push offs (Against a wall) Sit ups Sit down and stand up			Getting started	Building me	Getting fitter	My Goal
			Number of times I must repeat the activity			
			Week 1-3	Week 4-8	Week 9-12	Week 13 onwards
		Push-ups/offs (on the ground or against the wall)	10 times	15 times	20 times	30 times or more
	Sit-ups		15 times	25 times	30 times	40 times or more
	Sit down and stand up		20 times	25 times	35 times	40 times
Stretching Arms and legs			Getting started	Building me	Getting fitter	My Goal
			How long I must hold and how many times I must repeat each stretch			
			Week 1-3	Week 4-8	Week 9-12	Week 13 onwards
	Arm stretch		Count to 30 1 x each arm	Count to 30 2 x each arm	Count to 30 3 x each arm	Count to 30 3 x each arm
	Leg stretch		Count to 30 1 x each leg	Count to 30 2 x each leg	Count to 30 3 x each leg	Count to 30 3 x each leg
	Leg stretch		Count to 30 1 x each leg	Count to 30 2 x each leg	Count to 30 3 x each leg	Count to 30 3 x each leg

FOOD AND EATING

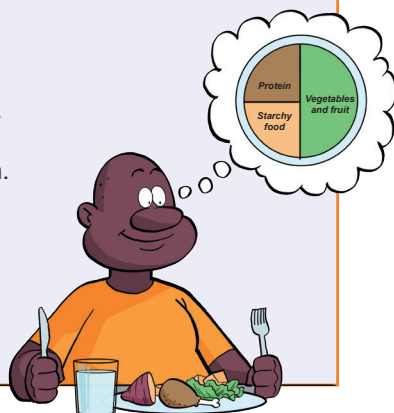
Every person needs to eat and drink to live because food makes our bodies work. What we eat and how we eat matters. Food is one of the **MOST IMPORTANT** ways to create and maintain health. When you have diabetes, one thing that **YOU** can do is eat healthy.

Healthy Eating Means Taking Charge and Eating Right

Healthy eating is about what you eat, **when** you eat and **how much** you eat. When you eat healthy you **manage diabetes**. Healthy eating helps stop diabetes from controlling you.

10 Ways that Eating Right Helps You.

1. You feel well.
2. Insulin works better.
3. You control your blood sugar (glucose levels).
4. You lower your blood pressure.
5. You do not feel hungry too soon and too often.
6. You bring down the chances of getting heart, kidney, eye and other health problems.
7. You control your weight.
8. You can be more active.
9. You feel like exercising.
10. You help everyone around you stay well.



Plan

To eat healthy you need a plan. A plan is a way of knowing what **you want to do**. A healthy eating plan is the **plan you make to eat right**. There are five golden rules that you must follow.

1. Plan to eat the right type food (low fat, low sugar, low salt, high fibre, protein, vegetables, starch and fruit).
2. Plan to eat the right amount of food (1/2 vegetables and fruit, 1/4 protein, 1/4 starch on a plate),
3. Plan to eat regularly and often (same time every day, 3-5 times a day).
4. Plan to drink water (6-8 glasses a day).
5. Plan to eat what you can afford and get easily.

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Learn

To eat right you have to get to **know about food**. Learn about the types of food there are. Learn how to buy food that is good for your health. Learn how to prepare food for healthy eating. Learn what works for you. Learn what to do when you can't keep to your plan. This way you can practise eating right.

Food Groups Facts

There are five food groups.

1. **Carbohydrates or Carbs** come from starchy foods.

- ☺ We eat carbs when we eat food made from grains and some vegetables and fruit. These are foods like mealie meal, samp, bread, rice, butter beans, pasta, potatoes, bananas, sweet potato, oats, sorghum and breakfasts cereals.
- ☺ Carbs give us energy, calcium and B vitamins.
- ☺ Carbs give us fibre that helps digestion.

Do you know? Sugar is a carb.

- ☺ Natural sugar is the sugar that is found in vegetables and fruit or made by bees (honey).
- ☺ Sugar that is taken out of vegetables and fruit and added to food is not natural.
- ☹ Sugar added to food and drinks is not good for our health.
- ☹ Carbs increase blood sugar the most.

2. **Proteins** come from meat, dairy, dry beans and nuts.

- ☺ We get protein when we eat things like chicken, eggs, beef, lamb and pork.
- ☺ We also get proteins when we eat plant foods like dry beans, lentils, nuts and soya.
- ☺ Proteins help the body grow and repair itself.
- ☺ Proteins give us iron and some minerals and vitamins.

3. **Milk and Dairy** is food made from the milk of animals, like cows, goats and sheep.

- ☺ We eat dairy when we eat things like cheese, yoghurt, milk or cream
- ☺ Milk and dairy contains protein and calcium and some important vitamins (B12, A and D).
- ☺ Milk and dairy foods keep bones and teeth healthy.
- ☹ Milk and dairy contain fats.

4. Fruit and Vegetables are foods that come from plants.

- ☺ Fruit and vegetables have lots of vitamins and other substances that the body needs to stay healthy.
- ☺ Fruit and vegetables have fibre that helps with digestion.
- ☺ Fruit and vegetables have natural sugar which the body needs in SMALL amounts.

5. Fats

- ☺ We eat fat when we eat butter, rama, oil, mayonnaise, cream, pork and meat fat.
- ☺ Some fats are good for our health. These are called unsaturated fats.
- ☹ Some fats are bad for health. These are called trans fats and saturated fats that become cholesterol in the body. They are often used in manufactured foods, biscuits and cakes and store bought fried food. The fat we see on meat and chicken is also bad for health
- ☺ We need good fats in small amounts to stay healthy.
- ☺ We need good fats to help the body get in some vitamins from foods (Vitamins A,D, E, K).
- ☺ Fats give us energy.

Now that you know the food groups, you can start to choose the right food to help you eat right.

Choosing the Right Food

So what are the right types of food for you and your family?

1. Right foods are foods **low in fat.**

- ✓ Eat low fat dairy like low-fat milk or yoghurt or chicken cooked without skin or meat with fat removed.
- ✓ Boil and steam food without fat.
- ✗ Don't eat food that is fried.
- ✓ Measure any fat you use in a spoon – don't just pour.
- ✗ Don't eat food with hidden fats like polony, Russians, mayonnaise.
- ✗ Don't use cremora – it is just unhealthy fats.

2. Right foods are foods **low in sugar.**

- ✓ Eat no more than two fruits in a day.
- ✓ Try not add sugar to porridge and other food when you cook.
- ✓ Try not add sugar to drinks like tea or coffee.
- ✓ Try not to eat jam, honey or syrup.
- ✗ Don't drink coke or other cold drinks.
- ✓ You can use sweeteners like canderel

3. Right foods are foods **low in salt**.

- ✓ Only add a little salt in cooking.
- ✓ Don't add salt when you are eating.
- ✓ Avoid processed foods like polony, Russians
- ✗ Avoid tinned meat and vegetables as possible
- ✓ Avoid pickles, atchar, chakalaka.

4. Right foods are foods **high in fibre**. These are things like

- ✓ Brown bread, whole wheat and low GI (choose the one affordable for you)
- ✓ Fruit with the skin on.
- ✓ Green leafy vegetables like cabbage, spinach, morogo.
- ✓ Boiled or roasted fresh mealies, beans, lentils, corn rice, unsweetened pop corn.



Your Goal: Plan to eat the right food, in the right amounts at the same time each day.

Plan Your Meals

Now that you know the food groups and the right food you can make a food plan.

A food plan

- ☺ Helps you shop for the right food.
- ☺ Helps you eat the right food.
- ☺ Helps you eat on time.
- ☺ Prevents you from having to skip a meal.
- ☺ Helps you control your diabetes.
- ☺ Helps you stay healthy.
- ☺ Puts you in charge.

Plan *when* you are going to eat.

Blood sugar levels change throughout the day. Many of the reasons why this happens are not in your control. But **how often you eat** and **when you eat** are in your control.

Your Meal Timetable.

Let's do a meal timetable self-check.

1.	Do you eat breakfast first thing in the morning?	EVERY DAY	<input checked="" type="checkbox"/>
		SOMEDAYS	<input type="checkbox"/>
		NO DAYS	<input type="checkbox"/>
2.	Do you eat lunch in the middle of the day?	EVERY DAY	<input type="checkbox"/>
		SOMEDAYS	<input type="checkbox"/>
		NO DAYS	<input type="checkbox"/>
3.	Do you eat supper in the evening?	EVERY DAY	<input checked="" type="checkbox"/>
		SOMEDAYS	<input type="checkbox"/>
		NO DAYS	<input type="checkbox"/>
4.	Do you miss a meal ?	EVERY DAY	<input type="checkbox"/>
		SOMEDAYS	<input type="checkbox"/>
		NO DAYS	<input type="checkbox"/>
5.	In a day do you do eat a snack ?	MID-MORNING	<input type="checkbox"/>
		MID-AFTERNOON	<input type="checkbox"/>
		AFTER SUPPER	<input type="checkbox"/>
		I DON'T SNACK	<input type="checkbox"/>

When you have diabetes you need to plan how many times a day you will eat and when you will eat. There are some simple things you can do to manage diabetes better.

- ✓ Space your meals across the day. This way you will not get hungry and you will keep your blood sugar steadier.
- ✓ Don't skip a mealtime.
- ✓ Don't eat one big meal at the end of the day. It will mess with your diabetes.
- ✓ Try to eat at about the same time each day.

When you eat right, you need to

- ☺ Eat breakfast in the morning soon after you wake up and after you have tested your blood sugar.
- ☺ Eat lunch in the middle of the day.
- ☺ Eat supper at the end of the day.
- ☺ If you eat snacks- have them in the middle of the morning and the middle of the afternoon.
- ☺ **Eat a snack before you go to sleep at night when you are on insulin.**



BRIEF INTERVENTION

Let's look at the difference between your self-check and the way eating should be spaced to prevent and manage diabetes.

1. Review the responses and talk about confidence and worries.

Ask questions like:

- ? What do you think about what you do and what you have learned?
- ? What are your concerns?
- ? What do you feel confident about?

2. Find the learning need. Focus on the (K-A-R-S) dimensions that the person sees as preventing them from keeping to an eating schedule. Is the person talking about

- ? K - *Knowledge?*
- ? A - *Abilities and skills?*
- ? R - *Relationships with others?*
- ? S - *Sense of self and feelings?*

3. Find solutions together.

- ✓ Share information.
- ✓ Provide practical support.
- ✓ Ask the person how he or she can overcome the challenge.
- ✓ Get advice or support for the person.

Do you know? It takes time and practice to find the right balance.



Your Goal: To make my meal plan fit with my life.

Plan *what* you are going to eat for each meal in a week.

To help you plan ask yourself these seven questions

- ☺ **What can I afford?** Right food is not special food. Right food is not expensive food.
- ☺ **Where will I be when I have the meal?** Be practical. Make your own food as often as you can. Prepare food like beans before meal time to make cooking quick and easy. Pack a meal for when you are not at home.
- ☺ **Who will I eat the meal with?** Right food is good for everyone. When you cook at home, encourage everyone to eat right. When you are out, choose food that is right for you.
- ☺ **What kind of food do I like to eat?** Choose the food you like. Shop so that you have the right food when you want it. It's your food plan.
- ☺ **What food groups should I include in each meal?** Make carbs part of each meal. Change the mix of carbs-proteins-vegetables or fruit at each meal.
- ☺ **What should I drink?** Water is best. Have it in a glass. Have it in a bottle. Have it cold. Have it hot. Have it on its own or with lemon. Have it with tea or coffee. Just don't add sugar or Oros. But remember- you can drink a sweet drink when you are hypo.
- ☺ **What snacks should I include?** Choose snacks like maas, fruit or popcorn without salt and spice.

Plan how much you are going to eat

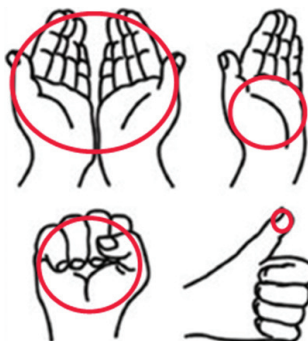
You have to learn how much food to eat in a meal. You also have to learn what the right amount of each food group should be in a meal. There are two easy ways to help you know about the amount of food you should eat at a meal.

1. Use your hands to guide the amount of each food group you need in one meal.



Vegetables as much as you can hold in both your hands
(2 cups)

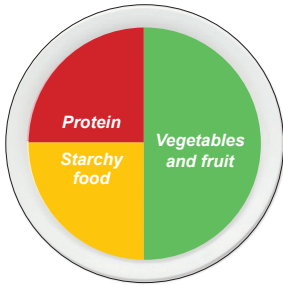
Grains, starches and fruits up to the size of your fist
(1 cup)



Protein (meats) and alternatives, e.g. beans, the size of the palm of your hand and thickness of first finger
(1/2- cup to 1cup)

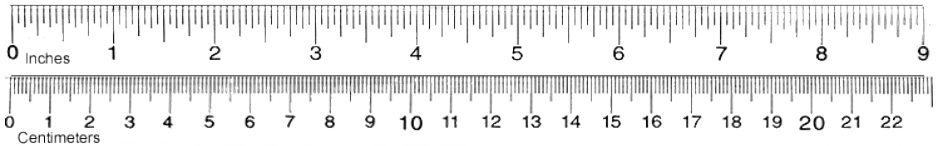
Fats the size of the tip of your thumb
(a teaspoon of oil)

2. Use a plate to guide your food choices at each meal.



7 Steps to Make an Eat Right Plate

1. Take a plate and divide it into three parts. Draw a line down the middle of the plate. Your plate now has two halves. Draw a line down across the middle of one half.
2. Fill the largest part with non-starchy vegetables.
3. In one small part, put grains and starchy foods.
4. In the other small part, put protein.
5. Add a fruit or a serving of dairy.
6. Use a teaspoon of fat to cook with or to add to salad or vegetables.
7. Drink a cup of water or tea or coffee without sugar.





BRIEF INTERVENTION

1. Find out and talk about confidence and worries.

Ask questions like:

- ? What do you think?
- ? How do you feel about what we have talked about?
- ? How do you feel about what you have read?
- ? What are your concerns?
- ? What do you feel confident about?

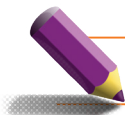
2. Focus on the learning need.

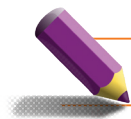
Is the person talking about

- ? **Knowledge?**- e.g. things that need to be explained more; the amount of information etc.;
- ? **Abilities and Skills?** – e.g. how to buy affordable food; how to cook food; how to make a food plan; how to keep to a food plan; what the words mean etc.
- ? **Relationships with others?** - e.g. changing family food habits; eating out; how much information to share; how to get people to be supportive.
- ? **Sense of self and feelings?** - e.g. feeling anxious about food; confidence to choose the right foods; manage portions; remember everything.

3. Find solutions together.

Explore the issues – talk about the information using the text, discuss feelings, talk about possible actions, get information, ask about and get support.





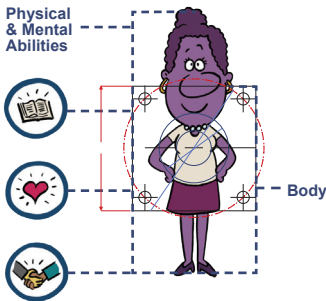
ALCOHOL

When you live with diabetes you have to think about and manage everything you take into your body. You already know how to do this with food, juices, soft drinks and beverages like tea, coffee and milo. But what about alcohol? Well, it is just the same. **If you take alcohol, you have to know about and learn how to manage your drinking.**

Alcohol affects your health in different ways. Physically, alcohol often has carbs so when you drink you add calories. This can make your blood sugar spike and it can make you put on weight. Also alcohol makes your liver work twice as hard. This is because it has to keep your blood sugar steady AND get rid of the alcohol in your body. When your liver can't keep up, your blood sugar can drop and stay low, putting you in danger of having a hypo.

Do you know? Your risk of having a hypo doesn't go away after you stop drinking. It actually increases. And this danger can last up to 24 hours! Also people can mistake having a hypo for being drunk. This is why when you drink, you have to make and stick to your safe drinking plan.

Dimensions of a person.



Alcohol also makes diabetes complications worse. Heavy drinking dehydrates your body and stops you sleeping properly. It can raise your blood pressure and make nerve damage worse. It also can lead to certain cancers and heart disease.

Alcohol affects your emotions. This is because it is a depressant. It can make you feel worse if you are upset or down. It also can affect your ability to think rationally for yourself.

It can lead you to skip meals or make poorer food choices, be unmotivated to exercise, as well as forget to take your medicines and monitor your blood sugars. Alcohol also can affect your relationships with family and friends, the very people you need to help and support you to manage diabetes. Generally, drinking alcohol makes it harder for you to achieve your goal of keeping diabetes under control. This is especially true when you inject insulin.

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Do you know? Alcohol can cause your sugar to go up or down or up and then down!



BRIEF INTERVENTION

1. Lets talk about alcohol and diabetes.

Ask questions like:

- ? What do think about what you do and what you have learned?
- ? What are your concerns?
- ? What do you feel confident about?

2. Find the learning need. Focus on the dimensions that the person sees as preventing them from keeping to an eating schedule. Are they talking about

- ? *Knowledge*
- ? *Abilities and skills*
- ? *Relationships with others*
- ? *Sense of self and feelings*

3. Find solutions together.

- ✓ Share information.
- ✓ Provide practical support.
- ✓ Ask the person how he or she can overcome the challenge.

Knowing all of this is not enough. You have to do two important self-checks. You do the first check to prevent the harms of alcohol.



Check 1: Is it Safe-to-Drink?

When you live with diabetes do a quick, 'Safe-to-Drink' Self-Check. Ask yourself 6 questions before you drink any alcohol.

1. Am I starting insulin?
2. Is my blood sugar uncontrolled?
3. Do I have difficulty limiting the amount of alcohol I drink?
4. Do I have a history of binge drinking?
5. Am I taking any **prescription or over the counter medicines** that interact with alcohol?
6. Do I have diabetes related complications, high blood pressure, high blood fats, depression and anxiety or other health problems?

If you answered YES TO ANY ONE of these questions, **YOU should not drink any alcohol of any kind.**

Do you know?

Because you are starting insulin YOU should not drink any alcohol. If you do drink, you will find it very difficult to take control of your diabetes. It will make injecting, taking medicines, eating right and exercising right even harder.



Your Goal: To take control of diabetes.

Drinking safely means learning to do things that bring down the risks and harmful effects of alcohol, when you taking insulin and other medications, you need to eat right and exercise right.

If you answered NO TO ALL of the “Safe-to-Drink” Self-Check questions, YOU MUST learn how to drink safely, before you decide to drink at all.



Check 2: What I need to do to Drink Safely.

1. Set a ‘drinking safely’ goal.

To drink safely you need to drink alcohol in moderation, in a supportive environment, taking into account diabetes. This means drink in small amounts, drink slowly, drink from time-to-time and follow good diabetes management practices.



Your Goal: To drink alcohol in moderation, in a supportive environment, taking into account that I need to keep diabetes under control.

2. Make a “Safe-Drinking” Plan

A “safe-drinking” plan is a way of preparing so you know what to do to meet your ‘safe-drinking’ goal.

2.1. Drink in moderation

To drink in moderation, you have to make two decisions that take account of the fact that you live with diabetes. How much you will drink in a week and how much you will drink on any one occasion.

STANDARD MEASURE FOR 1 UNIT OF ALCOHOL



1 x 330ml CAN LIGHT BEER



1 x 120 ml GLASS OF DRY WINE



1 x SINGLE TOT OF WHISKY, GIN OR VODKA

2.2.1 How much to drink.

- ☺ When you live with diabetes you can drink alcohol only in moderate amounts AND only when your blood sugar levels are controlled.
- ☺ A moderate amount means NOT DRINKING ANY ALCOHOL for at least two days in a week.
- ☺ A moderate amount means you can have a maximum of
 - ✓ 1 drink a day (for women).
 - ✓ 2 drinks a day (for men).

2.2 Practice low risk drinking.

- ☺ Know your blood sugar is at a safe level (5-8mmol/l) before and while you drink alcohol.
 - ✗ Do not drink alcohol if your blood sugar is less than 4 mmol/l and treat the hypo.
 - ✓ Test your blood sugar levels more often when you drink, to learn how your body responds to alcohol.
- ☺ Plan to eat when you drink. This helps you to control the effect of alcohol on your blood sugar levels. It will stop you from getting drunk.
 - ✓ Always eat before or while you drink.
 - ✗ Don't skip a meal
 - ✗ Test your blood sugar levels before you drink.
 - ✗ **Never drink on an empty stomach.**
- ☺ Keep yourself hydrated. Drinking alcohol can make you dehydrated because you pee more often.
 - ✓ Drink more than one glass of water or sugar free drink between each drink.
 - ✗ Don't drink alcohol to quench your thirst.
 - ✗ Don't drink caffeine drinks (redbull) or take other stimulants.


- ☺ Limit the amount of extra carbohydrates that comes from alcohol.
 - ✓ Drink light beer, a glass of wine, or a shot of distilled spirits.
 - ✗ Don't mix different kinds of alcohol - spirits, wine, beer.
 - ✓ Drink alcohol "on the rocks" or with water, club soda or sugar-free soda.
 - ✗ Avoid margaritas, daiquiris and other already mixed drinks.
 - ✓ Eat right, don't leave out good carbs from your food.

- ☺ Prepare to get support to meet your safe drinking goal.
 - ✓ Be aware of situations or people that make you want to drink.
 - ✓ Tell friends and companions you are diabetic.
 - ✓ Let them know what is and what is not safe for you to drink.
 - ✗ Be aware of people and situations that make you drink more than you want.
 - ✓ Ask one person to be your diabetes support buddy
 - Tell him or her how much you plan to drink.
 - Tell him what to do in case of emergency.

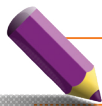
2.3 Prepare for Emergency.

When you drink alcohol you need a plan in case of emergency. To make sure that you are safe at all times you need to be prepared for emergency situations or when you may not be able to tell people what is happening to you or what they can do to help you.

- ☺ Always carry a diabetes ID.

<i>MY DIABETES ID</i>		
	<p>My name is</p> <p>I have diabetes</p> <p>I use insulin and (name of medicine)</p>	
In Case of Emergency Contact		
Medical + Emergency	Contact Number	When Available
Doctor		Day and Night
Clinic		Day
Community health worker		Day
Family Member		Day and Night
Neighbour		Day and Night
Emergency	10177	24 hours

- ☺ Always put an emergency contact number on your phone.
 - ✓ Call it ICE (In Case of Emergency).
- ☺ Drinking alcohol can put you at risk of a hypo. Always be ready to try to bring your blood sugar levels up.
 - ✓ Always carry a few Super Cs, or sweets on you.
 - ✓ Carry and use your glucose meter while you are out.
- ☺ When you are out drinking let a buddy or a companion know what a hypo is and how they should act to help you.
 - ✓ It looks like but is not being drunk.
 - ✓ Get me half a glass of a sugary drink or some sweets.
 - ✓ Call for emergency help – look on my Diabetes ID
 - ✓ Stay with me until help arrives.
- ☺ A hypo can happen up to 24 hours **after drinking alcohol**. It can feel like a hangover.
 - ✓ Check your blood sugar levels before you sleep.
 - ✓ Drink extra glasses of water before you sleep.
 - ✓ Check you blood sugar levels in the morning
 - ✓ Eat breakfast
 - ✓ Treat a hypo straight away. No matter how awful you feel, don't ignore it.



TRAVEL

Living with diabetes means you need to **manage your health when you travel** away from home. This becomes even more important when you inject insulin.

You have to be able to

- ✓ eat right;
- ✓ drink right; and
- ✓ take your medicines right

at all times to prevent your blood sugar levels going too high (hyper) or too low (hypo).



You need a **travel plan** to help you manage travelling and being away from home. It helps you **prepare to stay in charge** of your health. It prevents you from being thrown off your diabetes management routine.



Your travel plan has to cover two kinds of situations

1. **Day-to-day travel** – like going to and from work, school or town.
 - ☹ It **always takes time** for you to get to and from your destination.
 - ☹ The time it takes is **often unpredictable**. There are many things that can cause you to be delayed, stuck without food or water or late for your diabetes management routine.
2. **Travelling for special occasions**. This includes going to ceremonies like birthdays, weddings, funerals and customary events; visiting family or friends; going on holiday; going away for work etc..
 - ☹ This kind of travel usually involves **a journey that takes a long time**.
 - ☹ You often have to **sit for a long time in a confined space** - whether you go by car, taxi, bus, train or plane.
 - ☹ The **journey time** is often **unpredictable**. There are many things that can cause you to be delayed or stuck. You are also usually not in control of when stops are made.
 - ☹ You often **can't control the temperature** in the vehicle, train or plane - when it gets too hot or too cold.
 - ☹ You may not **feel able to check** your **blood sugar** levels easily.
 - ☹ This kind of travel usually involves **staying away from home or living in an unfamiliar place**.
 - ☹ You may find it hard to **eat right**.
 - The food may be unfamiliar or not prepared in a way that is good for you.
 - You may find it hard to eat on time, when you need it.

- You may find it hard to drink enough water.
- ☹ You may find it hard to **exercise right**.
- ☹ You may find it hard to **sleep and rest right** especially at ceremonial events.
- ☹ You may get **injured or sick** – due to accidents, poor food hygiene, being overtired etc.



Your Goal: Have a Travel Plan

Making a travel plan helps you manage diabetes well when you are away from home.



BRIEF INTERVENTION

Use the example to help the patient create their own travel plan

- ✓ Ask them to say what the task is?

Then help them make the plan:

- ✓ Find the learning need.
- ✓ Help them find ways to solve their concerns.
- ✓ Build skills.
- ✓ Support them with information.
- ✓ Grow their self-confidence.

Here is an example of a travel plan that you can use.



MY TRAVEL PLAN

1. Always Carry A Diabetes ID on Me

I have diabetes

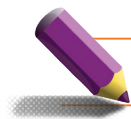
I use insulin and (name of medicine)

In Case of Emergency Contact

Medical + Emergency	Contact Number	When Available
Doctor		Day and Night
Clinic		Day
Community health worker		Day
Family Member		Day and Night
Neighbour		Day and Night
Emergency	10177	24 hours



2. What I Must Do		
Issue	Actions	How Much, How Often
Medicines	Carry all diabetes medicines and equipment	In Handbag, hand luggage
	Carry small first aid kit - antipyretics, painkillers, medication for diarrhoea and nausea, plasters etc.	In Handbag, hand luggage
	Keep medicines and equipment out of sun or draft	In lunch cooler bag
	Carry an emergency diabetic kit	Double amount short trip
Medication routine	Inject insulin on schedule	At night 21.00
	Take my diabetes pills	As usual
	Take my other prescribed medicines	As usual
	Test my blood sugar levels more often	At least 4 times a day
	Write down my sugar levels	After each test
Drink	Carry a bottle of water with me	Always
	Carry a juice or cold drink (not diet) to prevent a hypo	Always
	Drink more water or sugar free tea more often	1 cup every hour while awake
If my blood sugar is low after testing	Drink ½ a cup of juice, sweetened tea or sugary drink	Immediately
Eat	Carry snacks (fruit)	Day to day travel
	Carry snacks and a sandwich	Special occasion travel
If my blood sugar is low after testing	Eat three Super Cs or other sweets Drink a half cup tea with sugar or soda	Immediately
Physical activity	Stand up, stretch legs	During journey, often
	Walk around – don't sit	At each stop
	Stand and walk often	At ceremonies/events
	Follow Exercise routine	As often as possible
3. When I need medical help		
Travelling by plane	Call doctor for advice	2 weeks or more before flying
Emergencies	When my blood sugar levels are very high	Above 33mmol, immediately
	If I vomit	More than once
	If I have diarrhoea	For 6 hours or more
	If I have a high fever	Anytime
	If I have trouble breathing	Anytime
	If I can't think clearly or am confused	Anytime



SICK DAYS

Living with diabetes means you need to manage your health when you are sick. This becomes even more important when you inject insulin, because even a cold or the flu can cause you to have very high or very low blood sugar levels.

The way to manage illness is to make a plan for when you are sick. It helps you **prepare to stay in charge** of your health. It prevents you from being thrown off your diabetes management routine. And it helps the people around you know what to do in case of emergency.

Here is an example of a sick day plan that you may find useful.



MY SICK DAY PLAN

1. Always Carry A Diabetes ID on Me

I have diabetes

I use insulin and (name of medicine)

In Case of Emergency Contact

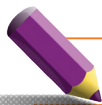
Medical + Emergency	Contact Number	When Available
Doctor		Day and Night
Clinic		Day
Community health worker		Day
Family Member		Day and Night
Neighbour		Day and Night
Emergency	10177	24 hours



Diabetes

15

2. What I Must Do		
Issue	Actions	How Much, How Often
Medicines	Inject insulin	At night 21.00
	Take my diabetes pills,	As usual
	Take my other prescribed medicines	As usual
	Test my blood sugar levels more often	At least 4 times a day
	Write down my sugar levels	Each time I test
Drink	Drink water or sugar free tea more often	I cup every hour while awake
<i>If my blood sugar is low after testing</i>	Drink juice, sweetened tea or a sugary drink	Immediately 1/2 cup, retest after 15 minutes
Food	Eat dry toast, provita, yoghurt, clear soup (home-made or packet) or what I can.	As often as I can
<i>If my blood sugar is low after testing</i>	Eat 3 Super Cs, or other sweet.	Immediately, retest after 15 minutes
Activity	Do not go to work, chores or physical activity	Until feeling better
	Get rest	As much as possible
3. When I need medical help		
Not sure what to do	Call doctor or nurse for advice	Anytime
Emergencies	When my blood sugar levels are very high	above 33mmol
	If I vomit	More than once
	If I have diarrhoea	For 6 hours or more
	If I have a high fever	Anytime
	If I have trouble breathing	Anytime
	If I can't think clearly or am confused	Anytime



MY CHECKLIST



LIVING WELL, MANAGING DIABETES MY GOAL: BEST POSSIBLE CONTROL

Service	Name	Number
Hospital		
Clinic		
Community Health Worker		
Doctor		
Support Group		

The 4Bs4Cs Programme

Bloods

B1 Blood sugar control	Blood sugar before breakfast 4 to 7 Blood sugar 2 hours after a meal 5 to 10 A1 test less than 7%	A1c Test	
		Date	Result
B2 Blood pressure control	Less than 140 (top reading) over 90 (bottom reading). Even lower with kidney damage.	Blood Pressure	
		Date	Result
B3 Blood cholesterol (fat) control	LDL cholesterol less than 1.8	LDL	
		Date	Result
B4 Breathe air not smoke	Reduce/ stop smoking; prevent second hand smoke	Smoking	
		Date	Result

Checkups				
C1 Check eyes at the eye doctor at least once a year	To prevent loss of vision/becoming blind	Eyes		
		Date	Result	
C2 Check mouth at the dentist at least once a year	To prevent or control gum and mouth disease and tooth decay	Mouth		
		Date	Result	
C3 Check kidneys at the doctor at least once a year	Do blood and urine test to prevent kidney failure	Kidneys		
		Date	Result	
C4 Check feet at the doctor or clinic at least once a year	Check skin, bones, blood vessels and nerves to prevent and treat foot sores and ulcers.	Feet		
		Date	Result	
Prescribed Treatment: The Medicines I Need to Take				
Reason	Name	How much	How Often	Start Date
To bring down blood sugar				
Reason	Name	How much	How Often	Start Date
To bring down blood pressure				

Reason	Name	How much	How Often	Start Date
To bring down blood fat (LDL cholesterol)				
Reason	Name	How much	How Often	Start Date
To protect heart				
Reason	Name	How much	How Often	Start Date
To protect kidneys				
Reason (other prescribed medicines)	Name	How much	How Often	Start Date

Over the counter medicines	Name	How much	How Often	Start Date

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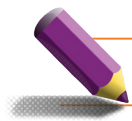
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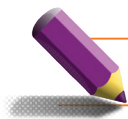
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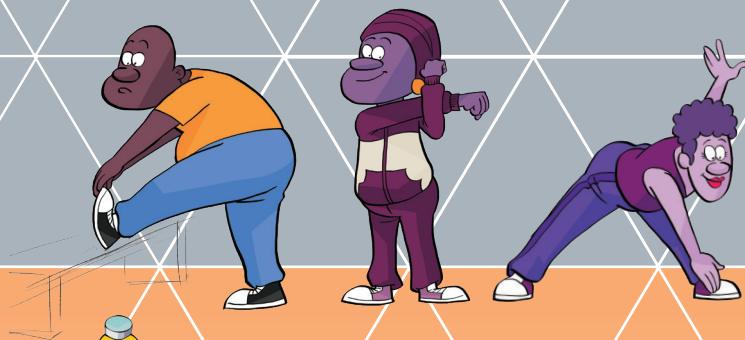
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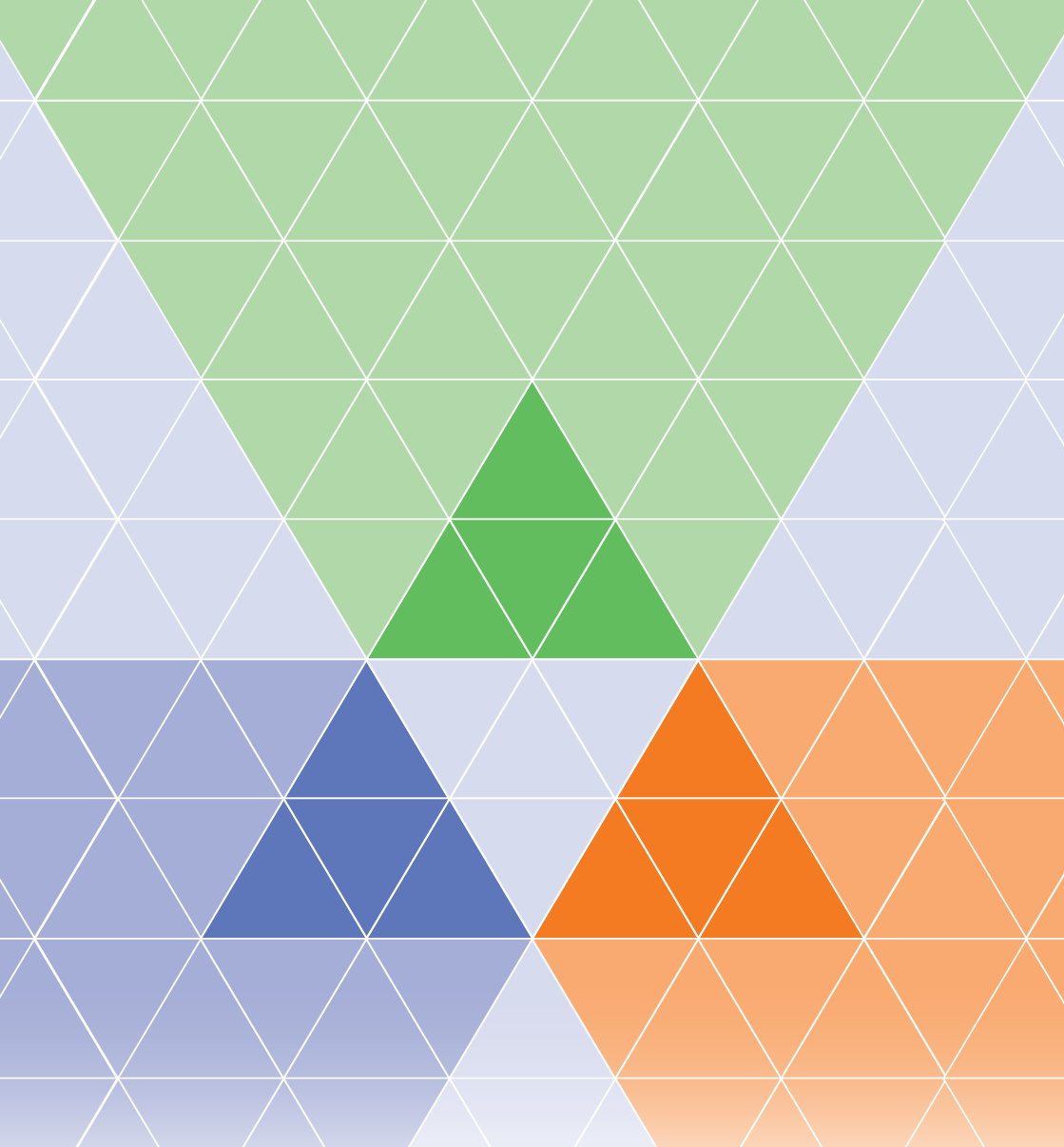


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