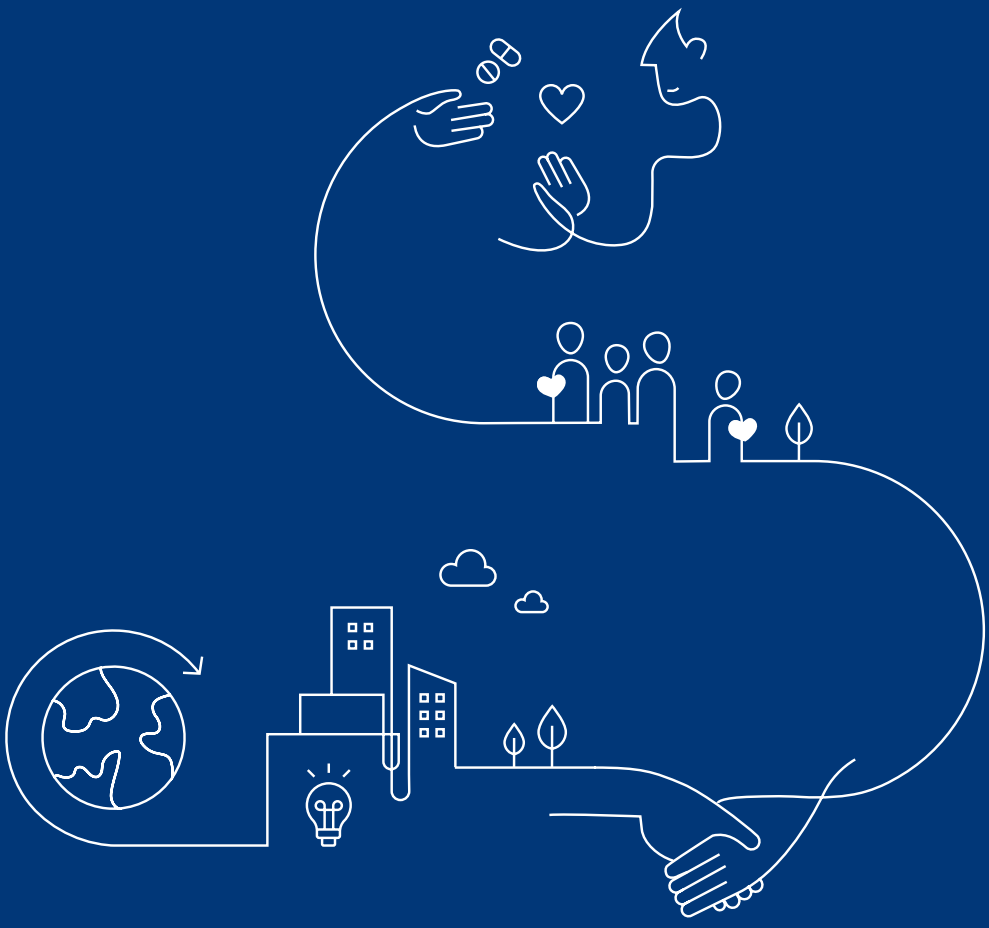
Managing your **diabetes**



Small changes, big differences

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What is diabetes?[1,2]

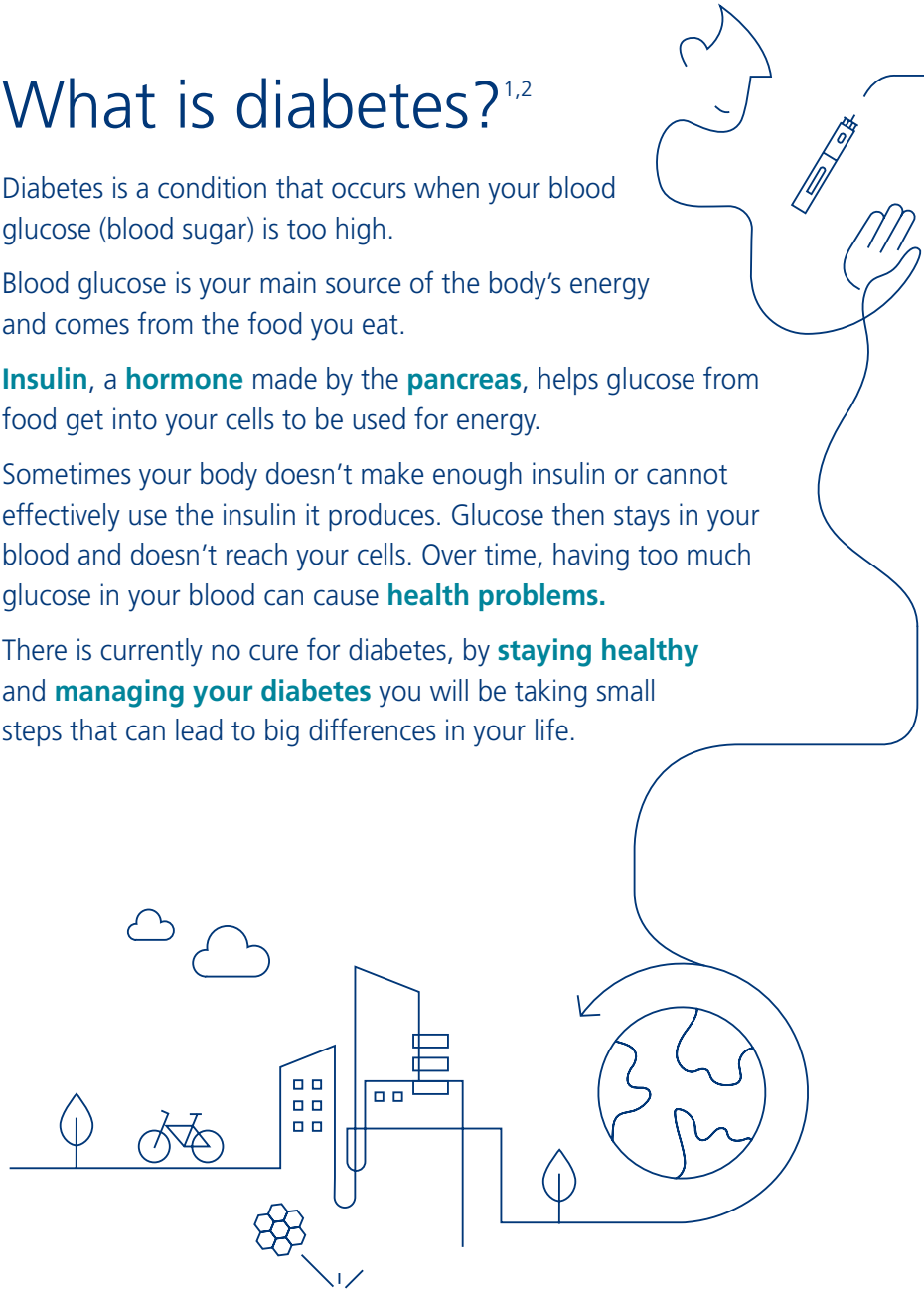
Diabetes is a condition that occurs when your blood glucose (blood sugar) is too high.

Blood glucose is your main source of the body's energy and comes from the food you eat.

Insulin, a **hormone** made by the **pancreas**, helps glucose from food get into your cells to be used for energy.

Sometimes your body doesn't make enough insulin or cannot effectively use the insulin it produces. Glucose then stays in your blood and doesn't reach your cells. Over time, having too much glucose in your blood can cause **health problems.**

There is currently no cure for diabetes, by **staying healthy** and **managing your diabetes** you will be taking small steps that can lead to big differences in your life.



The more you know about diabetes, the better you'll be able to manage it. This booklet can help you get started.

What's the Difference Between Type 1 and Type 2 Diabetes?[1,2]

The amount of diabetes information out there can be overwhelming. And a lot of it can also be confusing, since much of what you hear or read about diabetes is really about type 2 diabetes, not type 1. The reason for this may be that type 1 diabetes is much rarer than type 2 diabetes. Here are the basic differences between type 1 diabetes and type 2 diabetes.

Here are the basic differences between type 1 diabetes and type 2 diabetes.

TYPE 1 DIABETES	TYPE 2 DIABETES
The body makes very little or no insulin at all.	The body doesn't make enough insulin or the body does not respond properly to the insulin it does make.
Approximately 10 % of people with diabetes have type 1.	About 90 % of people with diabetes have type 2.
Type 1 diabetes is usually diagnosed more often in children and young adults.	Type 2 diabetes is usually diagnosed in people who are middle-aged or older. It is increasingly seen in children and young adults owing to the rise in obesity, physical inactivity and inappropriate diet.

463 million people worldwide have been diagnosed with diabetes.[2]

Blood glucose

Hypoglycaemia (low blood glucose)[3,4]

What to look out for:

Hypoglycaemia – or a hypo – occurs when your blood glucose drops too low – **usually below 3,9 mmol/L.** The effects are often mild, but a severe hypo can be **life threatening.** It's important to learn how to spot your own symptoms as these can vary from person to person.

If you notice any of these common signs, test your blood glucose straight away. Your family, friends and colleagues should also be aware of the symptoms – they can sometimes be difficult to recognise in yourself. **The more help the better!**

Look out for:

- Sweating
- Dizziness
- Trembling
- Hunger
- Anxiety
- Irritability
- Palpitations
- Headache
- Confusion
- Nausea

Causes

You might get low blood glucose if you:

- Take certain medicines
- Eat too few carbohydrates
- Skip or delay meals
- Take too much insulin or diabetes medication (ask your diabetes care team if this applies to you)
- Are more active than usual
- Are sick
- Drink alcohol without eating enough food

What to do[3,4]

If your blood glucose level is below **3,9 mmol/L** or you have one or more of the symptoms, you must react straight away. You can treat a hypo by **eating or drinking 15 - 20 g of glucose** or carbohyrates. This could be:

One small carton of pure fruit juice

Three glucose or dextrose tablets*

A glass of a sugary drink (150-200 ml)

Five jelly babies or 6 - 8 Lifesavers or 2 - 3 Super-C sweets followed by a sandwich or fruit

After 10 - 15 minutes, measure your blood glucose again. If your reading is still low, try another treatment and take another reading in 10 -15 minutes.

TIP: Keep a stash of hypo treatments around the house, at work or anywhere else you spend alot of time.

*Available from your pharmacy

Blood glucose

Hyperglycaemia (high blood glucose)[5,6]

What to look out for:

Hyperglycaemia – or a hyper – occurs when your blood glucose levels are too **high.** You may be ill, stressed, or have eaten more food than normal. Just like with hypos, symptoms can vary and may even develop over the course of several hours or days. Keep an eye out for:

Causes

High blood glucose can happen if you:

- Miss a dose of insulin or other diabetes medication
- Eat differently or more than planned
- Are less active than usual
- Are under stress or sick
- High blood glucose can also happen as your diabetes changes over time.

Look out for:

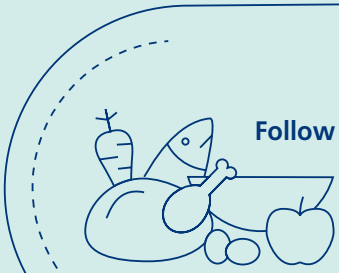
- Tiredness
- Thirst
- Blurred vision
- Urinating more frequently
- Headache
- Weight loss
- Thrush or other recurring bladder or skin infections

What to do[5,6]

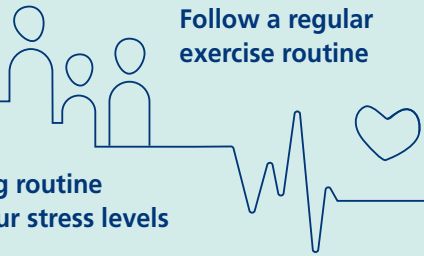
The best way to deal with hyperglycaemia is to prevent rather than react.
You should:

Stick to your insulin/diabetes medication prescribed by your doctor

Monitor your blood sugar regularly



Follow your diabetes eating plan



Follow a regular exercise routine

Good sleeping routine
Managing your stress levels

If you find you're having frequent high glucose (sugar) readings, arrange to see your doctor or diabetes nurse. You may need to adjust your insulin regime.

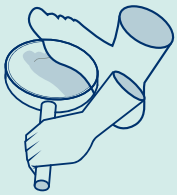
Foot Care for people with diabetes[4]

Diabetes can cause many **different foot problems.** It is possible for ordinary problems to get worse and cause serious complications. **Diabetes may cause nerve damage** that takes away the feeling in your foot. Many foot problems happen when there is nerve damage, also called neuropathy.

Tips to take care of your feet every day to help protect them.

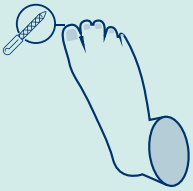
Wash your feet in warm water every day. Don't soak your feet as it can dry out your skin.

Dry your feet well, especially between the toes using a soft towel.



Inspect your feet every day for cuts, sores, blisters, redness, calluses, or other problems. If you cannot see too well, use a mirror, or ask someone else to regularly check your feet for you.

Keep the skin soft with a moisturising cream. Do not apply it between the toes as the extra moisture can lead to infection.



Cut or file your toenails. Don't leave sharp edges that could cut into your toe.

To avoid injuring your feet, never walk barefoot indoors or outdoors and wear shoes that fit well.

Always wear clean, soft, thick socks that are not too tight.

Before putting your shoes on, feel the insides for sharp edges, cracks or anything that could hurt your feet.

You should have a comprehensive foot exam by your doctor at least **every year.** Have your feet examined during every visit if you have problems with your feet, like loss of feeling, changes in the shape of your feet, or foot ulcers.

Speak to your health care professional or a podiatrist should you need more care for your feet.

Eat healthy[4,7,8]

An important way to manage your diabetes is through a healthy diet. Being mindful of **carbohydrate intake, eating smaller meals regularly, and choosing nutrient-dense, healthful** options can all help.

Eating healthy, satisfying foods and making smart food choices that meet individual nutrition requirements can help **manage your condition.** Knowing what food to eat can make a difference in managing your diabetes.

Approach every meal as a chance to make a healthy food choice

Healthy tips

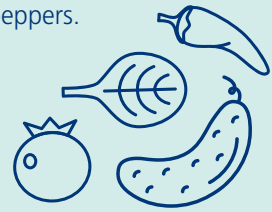
- Eat a wide variety of healthy foods.
- Choose carbohydrates from whole grains, legumes, vegetables and fruits.
- Fat-free/low-fat milk products.
- Eat lean meats, such as poultry and fish, and beans for protein.
- Limit the amount of saturated fat and salt.
- Cut down on added sugars.
- Keep to sensible amounts of alcohol.
- Space your eating throughout the day and don't skip meals.

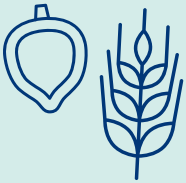
Food to limit or avoid

- Simple carbohydrates
- Saturated and trans fats
- Sugar, such as sweets, ice cream, and cakes

Good food examples[4,7,8]

Vegetables: Broccoli, salad greens, cauliflower, squash, onions and peppers. **Do not increase blood sugar**





Carbohydrates: Whole-wheat, wild rice, quinoa, oatmeal and barley. Whole grains/ unrefined carbohydrates break down slowly when consumed, allowing for **better management of your blood sugar levels**

Proteins: Lean meat, chicken, fish, eggs. Slow to digest and cause **only mild increase in blood sugar**

TIP: Make a grocery list of the healthy food you need to buy before going to the shops, stick to the list to avoid unhealthy purchases.

Stay active[4,8,9]

Exercise doesn't have to be a chore. **You don't have to climb a mountain or run a marathon** – you don't even need to join a gym. Exercise is anything that gets the blood pumping a little faster.

What can I do now?

- **Take the stairs:** you don't have to race up 12 storeys every day, but walking up one or two instead of getting in the lift will do you the world of good.
- **Go for a walk:** a brisk walk is a wonderful way of getting a good all-round workout and stretching those muscles and joints. It also helps to clear your head after a long day.
- **Release your inner child:** do you have young kids, grand kids, nephews or nieces? Get involved into their play time. Hide and seek keeps you fit and them entertained. Everyone's a winner.

Just 30 minutes 5 times a week is suggested.

Be patient, it may take a few weeks of physical activity before you see changes in your health.

Physical activity helps:

- Lower your blood sugar
- Improve your heart health
- Lower your blood pressure and cholesterol
- Burn calories to help manage your weight
- Improve your sleep
- Decrease stress and anxiety
- Improve mobility
- Give you energy
- Improve your mood

What can I do later?

Put together a fitness plan. Getting into a routine of manageable and varied activity is the best thing for your body.

Join a class

Being motivated and inspired by others, works well for lots of people.

Try something new

The key to keeping fit is finding an activity that's fun. You just need to discover the one for you.

Small changes, big differences

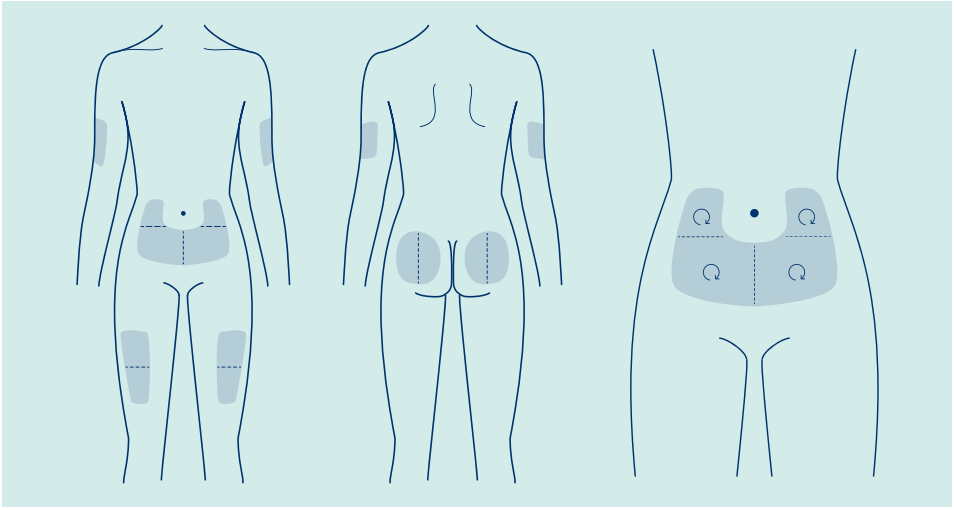
Before you inject here are a few tips that will help you give a comfortable injection

Injection Sites[10,11,12]

The main injection sites are the thighs, stomach, buttocks or backs of the upper arms. Ask your doctor or nurse which sites are recommended for you.

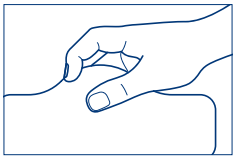
Make a mark of your recommended injection site. To increase comfort, make sure you choose a different place to inject for every injection.

- **Divide the injection sites into halves or quarters and use a different half/ quarter every week.**
- **In each half or quarter, rotate the place of injection clockwise by about the width of a finger from the last injection point.**



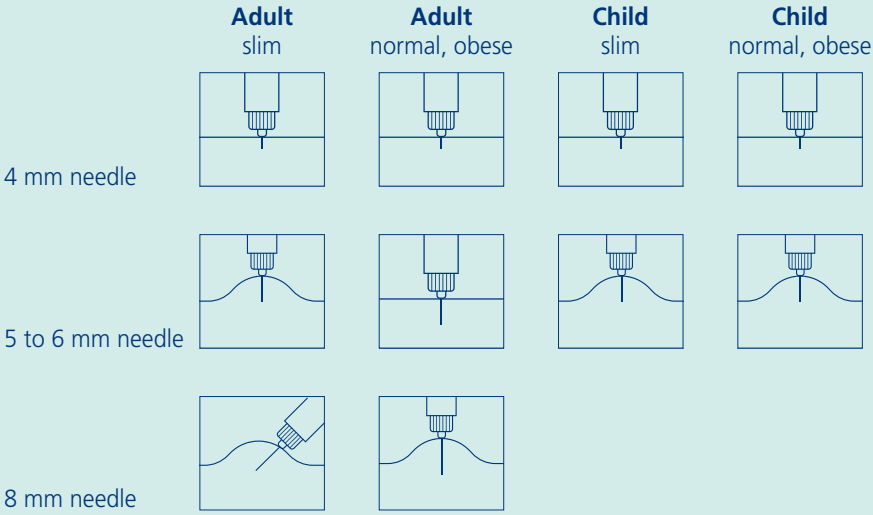
How to lift the skin[10]

To make sure insulin is injected under the skin, it can be helpful to inject into a skin fold. Lift a fold of skin between your thumb and index fingers. Keep it raised for 5 to 10 seconds after injection and until you have removed the needle from the skin.



Injection technique[10]

Insulin is injected **under the skin** in the **subcutaneous tissue.** How you should inject depends on your build and the length of the needle. You can see the different injection techniques below. Always make sure to use the injection technique and needle length recommended by your doctor or nurse.



Insulin storage[11,12]

How do I store my insulin?

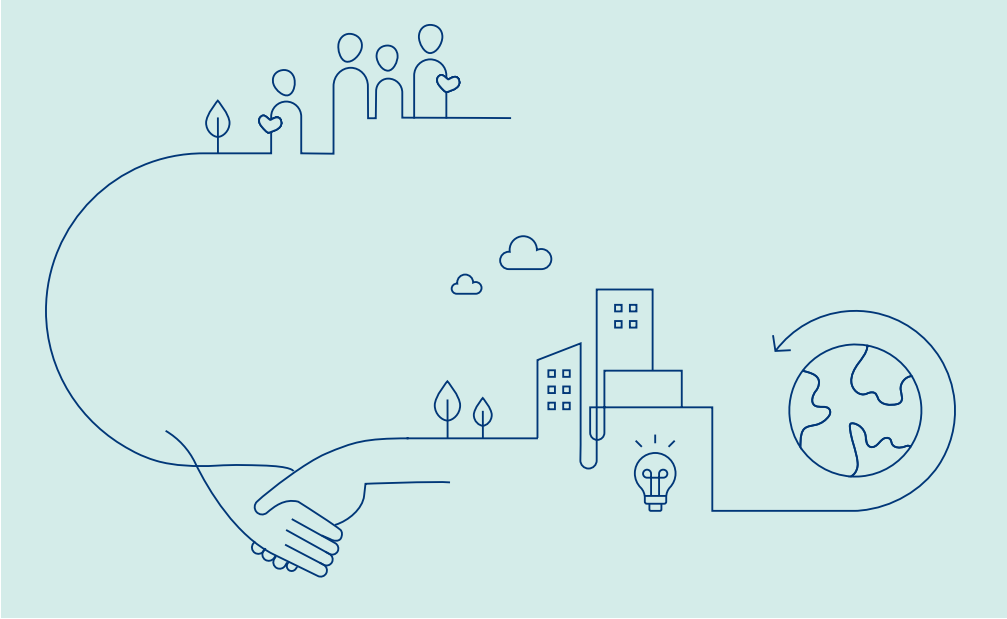
Keep out of the sight and reach of children. Do not use after the expiry date which is stated on the pen label and carton, after 'EXP'.

Before first use

Store in a refrigerator (2 °C to 8 °C) and keep away from the freezing element. Do not freeze. Keep the cap on the pen in order to protect from light.

After first opening or carried as a spare

Do not refrigerate. You can carry your pen with you and keep it at room temperature (not above 30 °C) for up to 4 weeks. Always keep the cap on the pen when you are not using it in order to protect from light.



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References: 1. National Institute of Diabetes and Digestive and Kidney Disease. What is Diabetes? Available at: https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes Accessed March 2024. **2.** International Diabetes Federation. IDF Diabetes Atlas 9th Edition2019. Available at https://diabetesatlas.org/upload/resources/material/20200302_133351_IDFATLAS9e-final-web.pdf Accessed March 2024. **3.** National Institute of Diabetes and Digestive and Kidney Disease. Low Blood Glucose (Hypoglycemia) Available at: https://www.niddk. nih.gov/health-information/diabetes/overview/preventing-problems/low-blood-glucose-hypoglycemia Accessed March 2024. **4.** The Society for Endocrinology, Metabolism and Diabetes of South Africa Type 2 Diabetes Guidelines Expert Committee. The 2017 SEMDSA Guideline for the Management of Type 2 Diabetes Guideline Committee. JEMDSA 2017;22(1)(Supplement 1):S1-S192. **5.** Mayo Clinic. Hyperglycemia in diabetes. Available at https://www.mayoclinic.org/diseases conditions/hyperglycemia/symptoms-causes/syc-20373631 Accessed March 2024. **6.** Diabetes UK. Hyperglycaemia (Hypers). Available at https://www.diabetes.org.uk/guide-to-diabetes/complications/hypers Accessed March 2024. **7.** Medical News today. The best grocery lists for type 2 diabetes. Available at https://www.medicalnewstoday.com/articles/317355 Accessed March 2024. **8.** Diabetes Mellitus (DM). MSD MANUAL Consumer Version. Available from https://www.msdmanuals.com/home/hormonal-and-metabolic-disorders/diabetes-mellitus-dm-and-disorders-of-blood-sugar-metabolism/diabetes-mellitus-dm. Accessed March 2024. **9.** National Institute of Diabetes and Digestive and Kidney Disease. Diabetes Diet, Eating, & Physical Activity Available at: https://www.niddk.nih.gov/health-information/diabetes/overview/diet-eating-physical-activity Accessed March 2024. **10.** Injection Technique Working Group of The Diabetes Education Society of South Africa (DESSA). Injection technique guidelines for diabetes: sharp and to the point. JEMDSA 2014;19(1):8-13. **11.** BIAsp 30 Professional Information. **12.** IDegAsp Professional Information.

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