

TIPS TO
**BETTER
HEALTH**

Keeping my Blood Sugar Level Healthy



LET'S
BEAT
DIABETES

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Be aware

Know your risk and screen for diabetes.

Diabetes is one of the most serious and prevalent health issues we are facing today. Over 400,000 people in Singapore have diabetes and one in three of them may not be aware of the condition.

What is Diabetes?

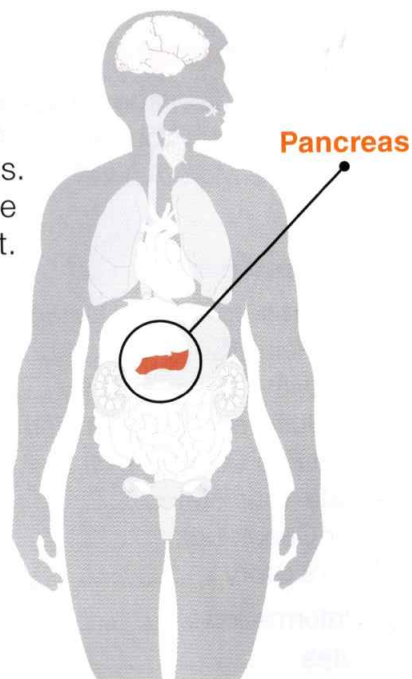
Our body breaks down the food we eat into sugar (glucose) and releases it into the blood. To help the sugar enter our cells and provide us with energy, the pancreas produces a hormone called insulin.

When you have diabetes, the pancreas produces less or no insulin, resulting in high blood sugar.

There are 2 types of diabetes:

Type 2 Diabetes is the most common form of diabetes, usually found in adults. It happens when the body does not use insulin properly or produce enough of it.

Type 1 Diabetes is usually found in children and young adults, where the body produces little or no insulin.



In a healthy person:
Insulin key fits correctly and sugar enters cell normally



In a person with Type 2 diabetes:
Insulin key cannot fit and sugar stays outside cell, causing high blood sugar levels.



What is Pre-Diabetes?

Pre-diabetes is a condition in which blood sugar levels are higher than normal but not high enough to be diagnosed with diabetes.

Pre-diabetes has no signs and symptoms and affects both adults and children.

Lifestyle interventions play a key role in preventing or delaying the progression to diabetes and cardiovascular diseases.

Symptoms of Diabetes

Sometimes, people with diabetes may:



Feel more thirsty than usual



Feel very tired



Feel hungry more easily



Have sudden weight loss



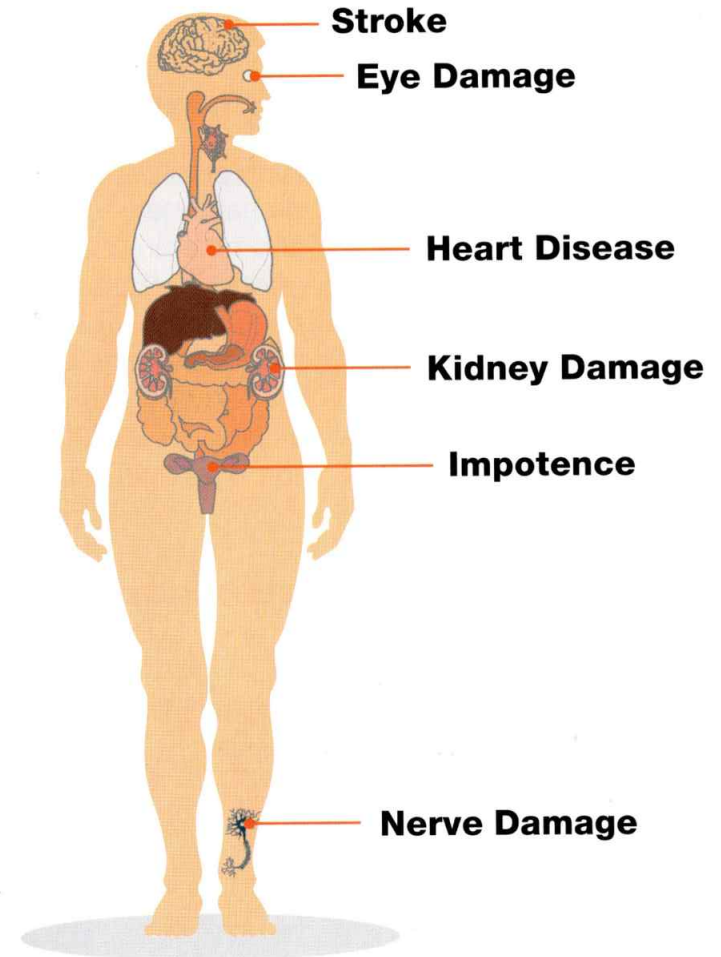
Have wounds that take a long time to heal



Urinate more often

Why Worry about Diabetes?

If not managed properly, diabetes is a chronic medical condition that can lead to serious complications like:



Eye Damage

Did you know that diabetes can affect the eyes? The blood vessels of the eye may bleed, affecting the eyesight and sometimes lead to blindness.

Heart Disease & Stroke

High blood sugar damages the walls of blood vessels and can cause high blood pressure. This may cause heart attacks or strokes.

Kidney Damage

High blood sugar levels can cause kidney failure. In serious cases, long-term dialysis will be needed.

Impotence

In men, diabetes can also cause difficulties in having an erection.

Nerve Damage

High blood sugar can damage nerves. Wounds and other injuries heal poorly. Foot ulcers may become infected and may require surgery to remove the infected foot.

Who is at Risk?

Diabetes can affect anyone. Knowing your risk of diabetes will help identify the changes you need to make to your lifestyle. You are at an increased risk of developing Type 2 diabetes if you:

40

Are aged 40 years and above



Have a parent or sibling with diabetes

BMI

Have a Body Mass Index (BMI) of 23.0 kg/m² or higher

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$



Have high blood pressure or high cholesterol



Have pre-diabetes



Have/had diabetes during pregnancy (females only)

How can I Prevent Diabetes?

Go for Regular Health Screening

You may not think that health screening is important, especially if you feel well. But health screening can help you pick up diseases early, allowing for earlier and more effective treatment! Refer to the table below to find out the recommended screening tests for your age group:

Who should be screened? ¹	What diseases must I screen for?	What kind of tests are needed?	How often? ¹
Individuals aged 18 - 39	Obesity	Body Mass Index (BMI)	Once a year
	High blood pressure	Blood pressure measurement	Once in 2 years or more often as advised by your doctor
	Diabetes	Fasting blood glucose ² <small>*After taking the fasting blood glucose test, depending on the results, you may be asked to take an oral glucose tolerance test to confirm if you are pre-diabetic or diabetic.</small>	Once in 3 years or more often as advised by your doctor
		Diabetes Risk Assessment (Short questionnaire on letsbeatdiabetes.sg/dra)	Changes to any one of the risk factors ³
High blood cholesterol	Fasting lipid profile	Once in 3 years or more often as advised by your doctor	
Individuals aged 40 years and above	Obesity	Body Mass Index (BMI)	Once a year
	High blood pressure	Blood pressure measurement	Once in 2 years or more often as advised by your doctor
	Diabetes	Fasting blood glucose <small>*After taking the fasting blood glucose test, depending on the results, you may be asked to take an oral glucose tolerance test to confirm if you are pre-diabetic or diabetic.</small>	Once in 3 years or more often as advised by your doctor
		High blood cholesterol	Fasting lipid profile

¹ Screening may be done earlier or more often if one has risk factors for the disease.

² Only for those found to be At Higher Risk of being diabetic via the Diabetes Risk Assessment.

³ Continue practising a healthy lifestyle. You are recommended to re-take the DRA every two years, or as often as there are changes in the variables (e.g. age, weight, high blood pressure, diagnosis of gestational diabetes during pregnancy and diagnosis of Type 2 diabetes in your immediate family).

Take the Diabetes Risk Assessment (DRA)

If you are 18 – 39 years:

You are encouraged to take the Diabetes Risk Assessment (DRA), which would then be followed by an invitation for screening should you be identified to be at higher risk of being diabetic.

If you are 40 years and above:

Go for regular health screenings every three years at:

- General Practitioner (GP) clinics
- Health screening events at community clubs

It is recommended that you screen for diabetes using a fasting (venous) blood glucose test. Your Community Health Assist Scheme (CHAS) doctor will be able to offer this to you. Remember to call your doctor early to book an appointment.

You will also need to fast (no food or drinks except water) for 8–10 hours beforehand, hence it is recommended that your appointment be in the morning.

What is the DRA?

The Diabetes Risk Assessment is a simple questionnaire available at HPB's HealthHub, which you can use to assess your risk of diabetes. With early detection and appropriate interventions, you can prevent or delay the onset of diabetes as well as the complications related to it.

The DRA is available on letsbeatdiabetes.sg/dra



What will the DRA tell me?

If your DRA outcome¹ is:



AT LOWER RISK

Continue practising a healthy lifestyle. You are also recommended to re-take the DRA every two years, or as often as there are changes in the variables (e.g. age, weight, high blood pressure, diagnosis of gestational diabetes during pregnancy and diagnosis of Type 2 diabetes in your immediate family).



AT HIGHER RISK

You will be invited for subsidised² screening at a Community Health Assist Scheme (CHAS) GP clinic of your choice. Your GP will recommend basic screening tests to determine your diabetic status at that point. We recommend that you make an appointment as there are pre-screening instructions for you to take note of. Booking an appointment with your GP facilitates your screening visit.



¹ The DRA outcome does not predict your lifetime risk for developing diabetes. The results only identify your risk of diabetes at the point of assessment.

² This subsidy is only applicable to Singaporeans who have logged in to MyHealth on HealthHub via Singpass to claim the Screen for Life screening package. Subjected to HPB's Screen for Life screening eligibility criteria.



at right

Eat in moderation. Choose more whole-grains, fruits and vegetables, as well as less sugar and saturated fat.

Did you know that keeping a healthy diet can improve your blood sugar levels? If you are overweight (BMI $\geq 23.0\text{kg/m}^2$) or pre-diabetic, it is even more important for you to have a healthy diet.

You can practise the 3Rs to eat healthily:

- Replace with healthier options
- Refrain from over-consumption
- Reduce sugar intake

1. Replace with Healthier Options



Look out for Healthier Choice Symbol (HCS) when dining out or grocery shopping for healthier food options



Use healthier oils



Consume more whole-grains

2. Refrain from Over-consumption

Know your average daily calorie limit



Female
1800kcal



Male
2200kcal

Portion your food with HPB My Healthy Plate

My Healthy Plate can help you to achieve a healthy diet by showing you how much to eat and what to eat at each meal.



How much do I need to eat in a day?

Use this table below for the number of servings you require from each food group. Remember to eat a variety of food in each food group.

Recommended number of servings per day

Food Groups	19–50 years	51 years & above	Pregnant & lactating women
	Brown Rice & Wholemeal Bread	5–7	4–6
Fruit	2	2	2
Vegetables	2	2	3
Meat & Others	3	3	3½
of which Dairy Foods or Calcium-Rich Foods	½	1	1

What is one serving of brown rice & wholemeal bread?

(This group also includes other items like whole-grain noodles, potatoes, wholemeal crackers, chapatis).



2 slices of wholemeal bread (60g)



½ bowl brown rice beehoon or whole-grain noodles (100g)



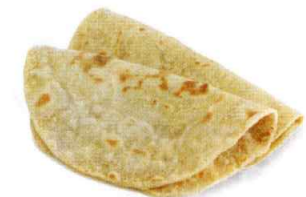
1 large potato (180g)



4 plain wholemeal crackers (40g)



½ bowl of rice or brown rice (100g)



2 chapatis (60g)

Choose whole-grain foods as they are higher in vitamins, minerals, fibre and antioxidants.

What is one serving of vegetables or fruit?

Vegetables



¼ round plate** of cooked vegetables (100g) or ¾ mug* of cooked leafy or non-leafy vegetables (100g)



150g raw leafy vegetables or 100g raw non-leafy vegetables

Fruit



¼ cup of dried fruit (40g)



1 small apple, orange, pear or mango (130g)



1 medium banana (130g)



10 grapes or longans (50g)



1 wedge of papaya, pineapple or watermelon (130g)

Eat a variety of fruit and vegetables that are brightly coloured as they are high in dietary fibre and vitamins.

*1 mug: 250ml **10-inch plate

What is one serving of meat and others?



¾ cup of cooked pulses like peas, beans or lentils (120g)



1 palm-sized piece of chicken breast (90g)



2 glasses of reduced-fat milk (500ml)



2 small blocks of soft beancurd (170g)








1 palm-sized piece of fish or lean meat (90g)

Choose lean protein (e.g. lean meat and fish). Replace meat with tofu, beans, lentils and peas on some days.

Sample Meal Plan

This sample meal plan is for a healthy adult. Based on your individual needs, you may have different requirements.

6 servings of whole-grains, 2 servings of vegetables, 2 servings of fruit, 3 servings of lean meat/alternatives in a day.

Time/M meal	Food	Servings
 7.30am: Breakfast	<ul style="list-style-type: none"> • 2 slices of wholemeal bread • 1 glass of low-fat milk 	<ul style="list-style-type: none"> • 1 serving of whole-grains • ½ serving of lean meat/alternatives
 10am: Snack	<ul style="list-style-type: none"> • 1 apple 	<ul style="list-style-type: none"> • 1 serving of fruit
 12.30pm: Lunch	<ul style="list-style-type: none"> • 1 bowl of sliced fish noodle soup 	<ul style="list-style-type: none"> • 2 servings of whole-grains • 1 serving of meat • ½ serving of vegetables
 3pm: Snack	<ul style="list-style-type: none"> • 1 wedge of papaya • 4 pieces of whole wheat crackers • 1 slice of low-fat cheese 	<ul style="list-style-type: none"> • 1 serving of fruit • 1 serving of whole-grains • ½ serving of lean meat/alternatives
 6pm: Dinner	<ul style="list-style-type: none"> • 1 bowl of brown rice • Stir-fried vegetables • 1 palm-sized piece of grilled lean chicken 	<ul style="list-style-type: none"> • 2 servings of whole-grains • 1½ servings of vegetables • 1 serving of lean meat

If you have diabetes or a medical condition, you should consult a doctor or a dietitian.

Healthy eating also means eating less foods that are high in sugar, fat and salt.

Eat less of:

- Deep fried snacks
- Pastries
- Desserts
- Sweetened drinks



Tips for a better diet:

- Choose products with the Healthier Choice Symbol (HCS) and eat these in moderation.
- Use low-fat cooking methods like boiling, steaming, baking, roasting and grilling.
- Use herbs and spices instead of salt to flavour your food. Eat less canned and preserved foods as they are high in sodium.



Rosemary Turmeric



Black pepper

Paprika

Curry leaves



3. Reduce Sugar Intake





Always ask for water, “siu dai” or lower sugar beverages.

Adopt an active lifestyle

Stay fit by engaging in at least 150 minutes of physical activity weekly.

What You can Gain from Physical Activity

The benefits of being physically active are plenty! Below are just a few good reasons:

-  Makes you feel good
-  Keeps diseases away
-  Keep your heart, lungs and bones healthy
-  Helps manage your weight

Aim for 150 minutes of physical exercise a week; do at least 10 minutes each time for health benefits. It's easy!

If you do not exercise regularly, check with your doctor before starting on a physical activity programme. Get a friend or family member to do it with you. Make it easy and fun!

Easy Tips to Keep You Going

Staying active can help you lose weight, burn fat and improve your blood sugar level. When done regularly, it can prevent heart disease and stroke. These are some tips you can do in your daily living:

-  Take a walk after dinner
-  Keep active by doing housework
-  Brisk walking to buy groceries
-  Getting off the bus one stop earlier
-  Taking the stairs instead of the lift

How can I be More Active?

Many people try to be more active but find it difficult. Sometimes, the key is setting a goal. Having support from friends and family helps too.

Write your goal here and share it with your family and friends.



Take control

Aim for a healthy weight, and have regular check-ups with your family doctor.

The Importance of Early Detection

Pre-diabetes may be reversible. Early diagnosis and lifestyle changes, such as eating a healthy diet, being physically active and staying at a healthy weight can lower your risk of developing Type 2 diabetes. It can even help to bring your blood glucose levels back into the normal range.

Diabetes is a “silent” disease in its early stages, and you can feel perfectly well until complications occur. It is important to go for regular health screenings even if you feel perfectly healthy and experience no symptoms.

Read on to discover how early detection helped both Mrs Lim and Madam Raja in managing diabetes.

Madam Raja's Story

“As a busy person, I did not want to waste time or money to go for health screening because I felt normal. I was also scared of seeing a doctor.

It was my daughter who encouraged me to go for a health check. I was so glad I did.

When I found out I had pre-diabetes, I was worried about my health, and that I could not enjoy food with friends or family anymore. But my doctor told me that by making small changes to how much I eat, I could still enjoy their company and my food.

Now I go for walks daily too. Because of my changed lifestyle, I have a healthier weight and feel better. I am a good role model to my children. I'm so glad I followed these tips.”

– Madam Raja

“With these lifestyle changes, you can have better health too!”
- Madam Raja



Dealing with Stress Healthily

When we do not cope well with stress, we tend to make unhealthy lifestyle choices. Over time, this can put us at increased risk for diabetes.

Here are some tips to deal with stress healthily.



Stay active

Even a short walk can be helpful in a stressful situation. Go for a swim, recharge on a walk, or take up yoga or tai chi.



Keep an active social life

Spend quality time with family and friends regularly. One of the best remedies for stress can often be simply to talk it out.



Prevent overeating

Eating for comfort when feeling stressed can lead to overeating. Replace eating with other activities that relieve stress, such as going for a swim.



Refrain from smoking and taking alcohol

Replace smoking and alcohol use with other activities that relieve stress, such as taking a walk.

Having Sufficient Sleep for Better Health

Having sufficient sleep is associated with lower risk of diabetes and better health.

Tips to get sufficient & quality sleep



Make time

Try to get at least 7 – 9 hours of sleep every night.



Set the mood

Ensure bedroom is comfortable and conducive for sleep.



Power down

Reduce screen time (e.g. television, handphone) and avoid stimulants (e.g. coffee, tea) before bed.

Keep An Eye On Your BMI

Calculate your BMI and keep your BMI in the healthy range (18.5–22.9 kg/m²) through an active lifestyle and healthy eating.



Calculate Your BMI

$$\text{BMI} = \frac{\text{WEIGHT (KG)}}{\text{HEIGHT x HEIGHT (METRE)}}$$

Regular Check-ups

Regular check-ups with your doctor is important for you to manage and monitor your condition.

If you have diabetes, maintain your blood sugar level within the targets as advised by your doctor.

Mrs Lim's Story

"When our good friend and neighbour Madam Fatimah had to remove her foot because of diabetes, my family was shocked. I asked my mother to go for her regular health check.

We were so glad that she went to see the doctor early. We found out that even though my mother felt normal, she was actually pre-diabetic. This means that she had a

"Remember to get screened today, for yourself and your loved ones! You can lead a happy and healthy life!"
- Mrs Lim



higher chance of getting diabetes. The doctor explained to us that with changes to her lifestyle, she could delay diabetes and avoid the complications like foot ulcers or heart attack.

My mother is so glad she went for screening to pick up the disease early. And we are proud of her for taking charge of her own health!
- Mrs Lim

More Information

To find out more:



Visit letsbeatdiabetes.sg



See your family doctor for advice on how to reduce your risk.



For general enquiries, contact HealthLine (available in 4 languages) at **1800 223 1313** during office hours or email hpb_mailbox@hpb.gov.sg



HPB Diabetes Prevention Programme for those with pre-diabetes: Visit letsbeatdiabetes.sg/dpp for more information or to sign up.



Chronic Disease Management: www.healthhub.sg

Keep a healthy lifestyle by:



Going for regular health screening



Keeping a healthy diet



Staying active