



Prevent *and* Manage Diabetes

Information Kit



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Nutrition Society of Malaysia
www.nutriweb.org.my



Malaysian Dietitians' Association
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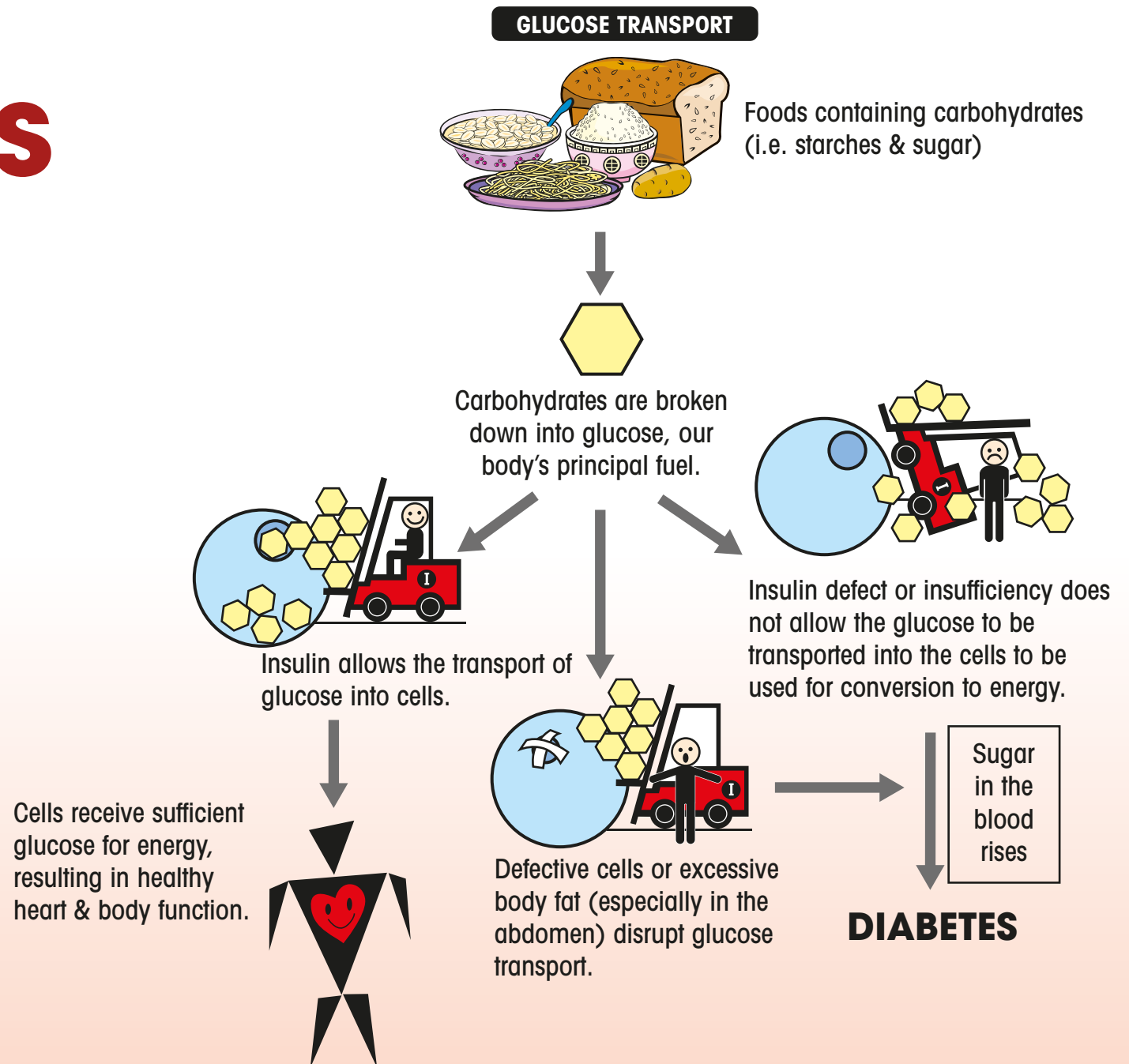


Malaysian Association for the Study of Obesity
www.maso.org.my

Diabetes Matters!

Did you know...

- 1 out of 5 Malaysians have type 2 diabetes.
- Diabetes is a condition in which the blood sugar levels in the body consistently stays above normal.



Are You at Risk?

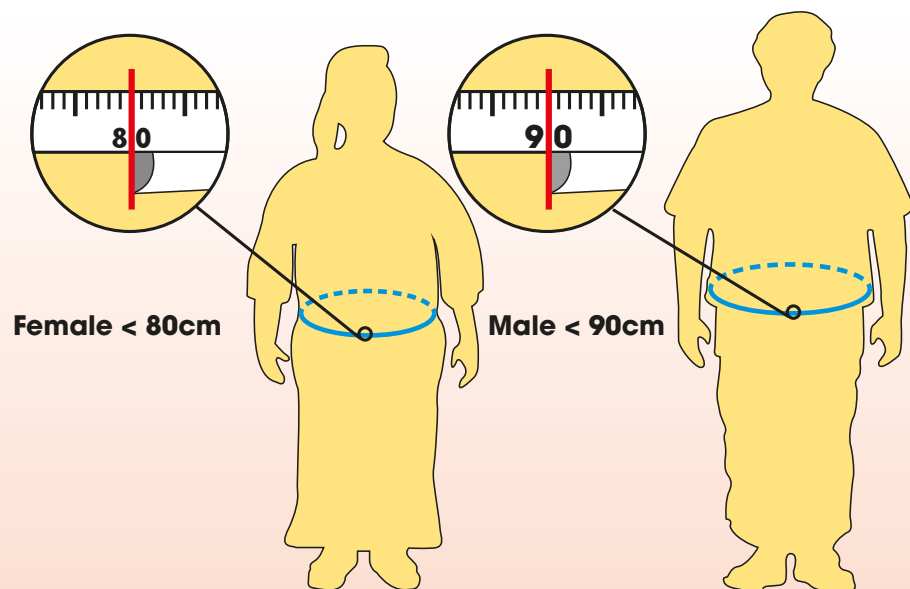
1 in 2 Malaysians with diabetes do not know they have the disease.

Major Risk Factor: Being Overweight Or Obese

Risk gets higher as your body mass index (BMI) and waist circumference increases

Fat around the belly (abdominal obesity) makes the body less sensitive to insulin and may lead to failure to control blood glucose levels

Aim for Normal range:



Overweight and obesity are caused by unhealthy diet and lack of physical activities.

You can prevent diabetes by eating right and moving more.

Other risk factors:

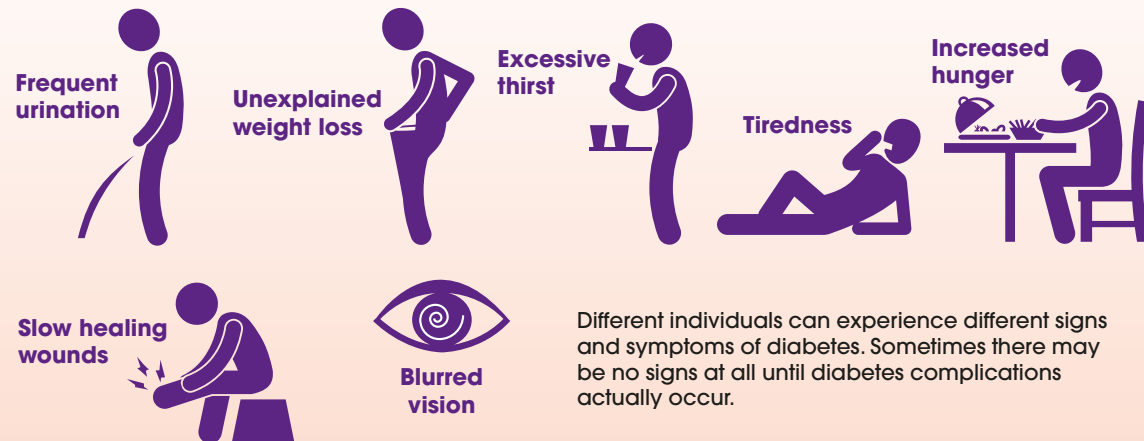
- Family members have type 2 diabetes
- Race (Malays and Indians have higher risk)
- High blood cholesterol
- High blood pressure

Get yourself checked for diabetes annually if you are above 30 and if you have the risk factors



Watch Out for the Warning Signs

Consult a health professional if you experience these signs and symptoms:

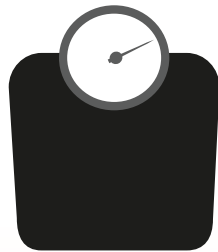


Say Yes to a Diabetes-Free Life

DIABETES IS PREVENTABLE!



Know your risks of diabetes and prevent it early.



Maintain a healthy weight.



Eat right.



Be active daily.



If you drink, limit your alcohol intake.



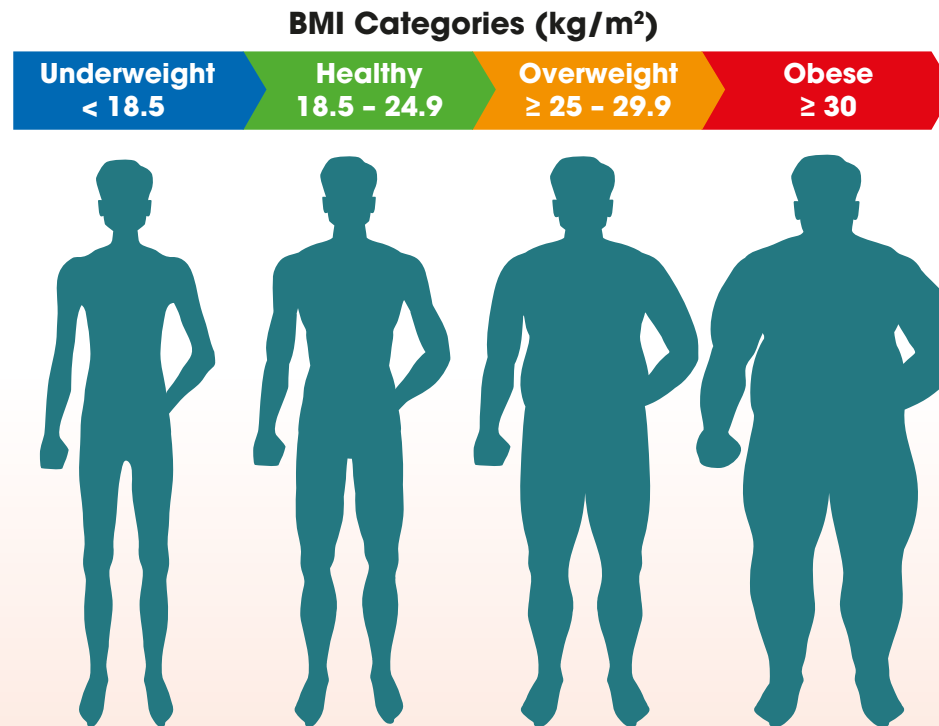
Quit smoking.



See your doctor for regular health check-ups.

Know Your BMI

Body Mass Index (BMI) is a simple way to know your body weight status. Being overweight and obese increases risk of type 2 diabetes.



Aim for Healthy Body Fat%

Normal: < 20% (men); < 30% (women)
 Moderate: 20-25% (men); 30-35% (women)
 High: > 25% (men); > 35% (women)

Know your Numbers

Aim for healthy values to reduce the risk of diabetes.

Blood pressure
< 130/85 mm/Hg



Fasting blood glucose
< 5.6 mmol/L
Random blood glucose
< 7.8 mmol/L



Total cholesterol
< 5.2 mmol/L



Waist circumference
< 80 cm (female)
< 90 cm (male)



Beware of Pre-diabetes

Diabetes is diagnosed when fasting blood glucose is detected to be greater than or equal to 7 mmol/L. Pre-diabetes is a condition where blood glucose levels are higher than normal but not yet high enough to be diagnosed as diabetes.

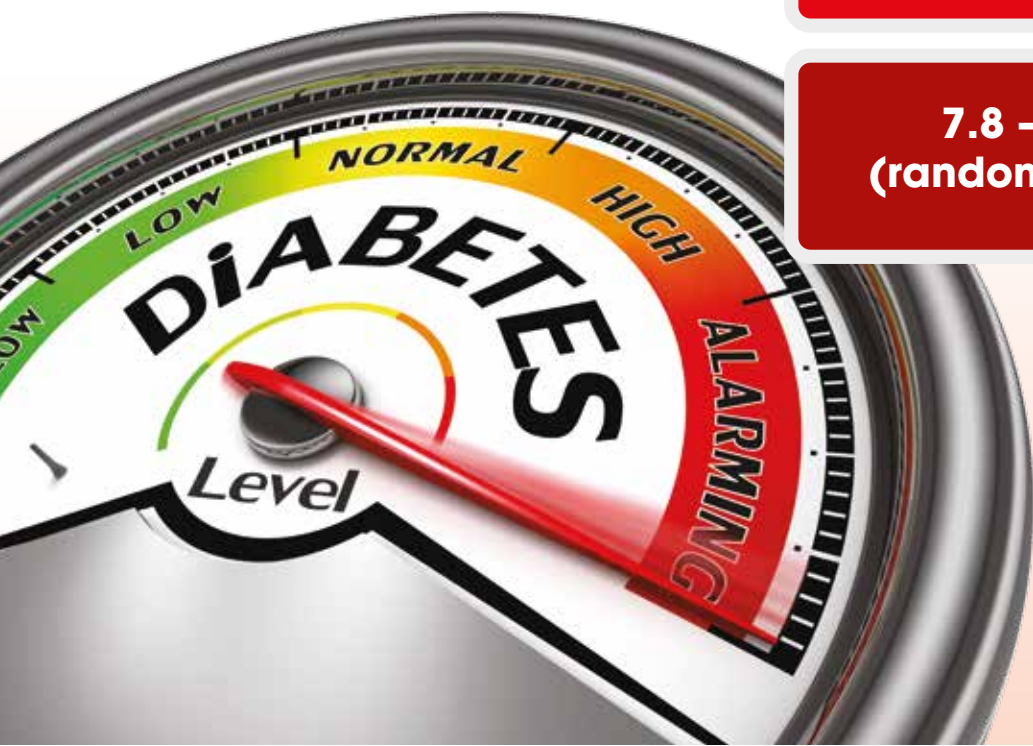
Blood glucose values for people with pre-diabetes:

6.1 – 6.9 mmol/L
(fasting blood glucose)

7.8 – 11.0 mmol/L
(random blood glucose)

People diagnosed with pre-diabetes are likely to develop type 2 diabetes in 10 years or less.

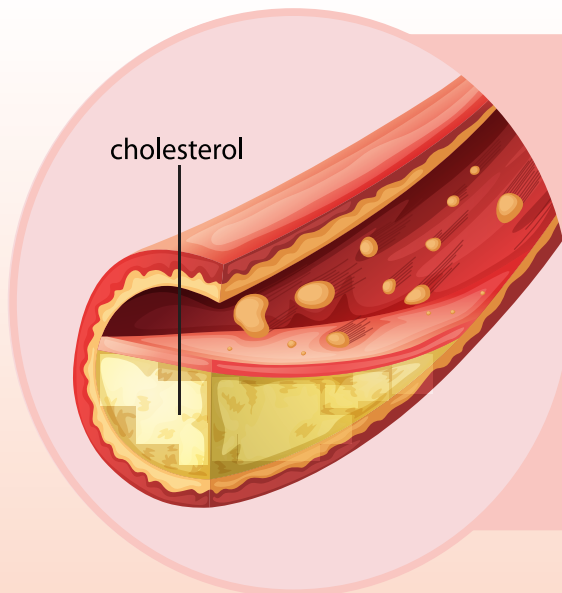
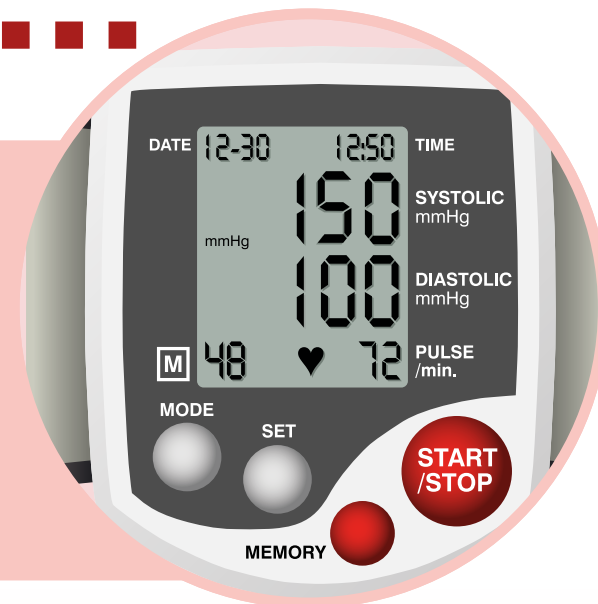
Bring your blood sugar back to normal levels by practising healthy eating, being active and maintaining a healthy weight. Changing your lifestyle will lower the risk of pre-diabetes condition progressing into actual type 2 diabetes.



Watch out for...

High Blood Pressure

- It is the pressure of blood in your arteries. Your blood pressure is recorded as two figures (systolic/diastolic).
- High blood pressure is a silent killer. People with high blood pressure have higher risk of getting a stroke or other heart diseases.
- Controlling blood pressure in people with diabetes helps to reduce the risk of future complications.



High Blood Cholesterol

- Cholesterol is an important substance in our bodies, needed to protect nerves, make cell walls as well as produce certain hormones.
- Our liver manufactures cholesterol in the body and in fact contributes much more to our total cholesterol than our diet does.
- Unhealthy cholesterol levels can raise your risk for type 2 diabetes.
- People with type 2 diabetes are also more likely to get heart disease.
- Controlling blood cholesterol is important for both type 2 diabetes prevention and management.

Eat Right, Stay Well

The Malaysian Food Pyramid is a guide to help you eat right and stay healthy. It's a simple tool that you can use to achieve wholesome meals daily.



Keep these three basics in mind when using the Food Pyramid:

Balance

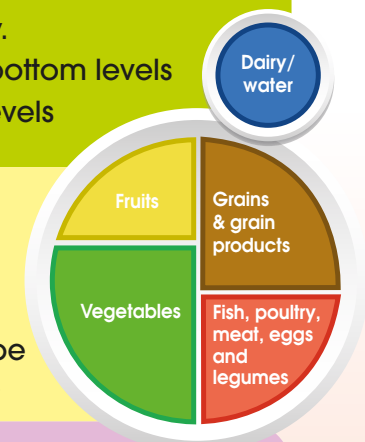
- Eat from all food groups daily.
- Eat more of the foods at the bottom levels
- Reduce those at the higher levels

Moderation

- Eat foods according to recommended servings
- Serving size of meals should be in accordance to your needs

Variety

- Eat a variety of foods within a group to get all the necessary nutrients
- Ensure variety throughout the day or the week!



Go Whole Grains

WHOLE GRAINS should make up half of your total grains intake. Whole grains are an excellent choice for weight management, blood sugar control, bowel health and lowering risk of heart disease and cancer.

Bran and **germ** are removed during the milling process to produce **refined grain** (e.g. white rice, white flour), which also removes dietary fibre, iron and many B vitamins. Without fibre, refined grains are rapidly digested and cause a faster rise in blood sugar levels.

Whole grain contains bran, germ and endosperm.

Germ. It contains:

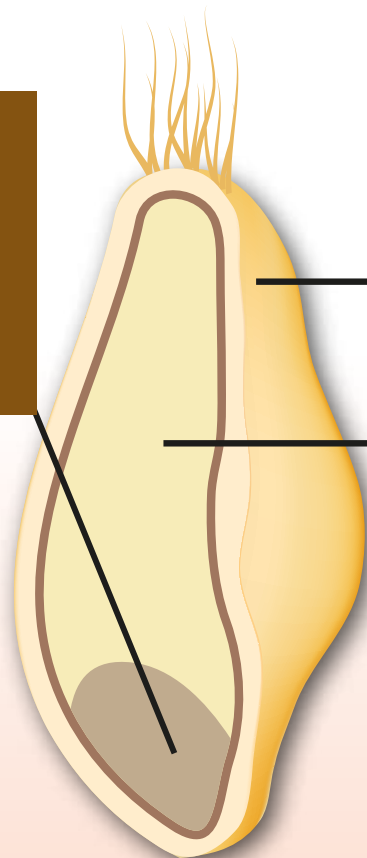
- B vitamins
- vitamin E
- unsaturated fatty acids
- phytonutrients

Bran. It contains:

- most of the dietary fibre
- B Vitamins
- iron, zinc and other minerals

Endosperm. It contains:

- mainly carbohydrate
- some proteins
- small amount of vitamins, minerals & phytonutrients
- little fibre



Get whole grains from

- Brown rice
- Whole wheat
- Oats
- Corn
- Rye
- Dehulled barley
- Wholemeal breads
- Wholegrain cereals
- Wholewheat pasta
- Wholegrain crackers

Fantastic Fibre

Make foods that are high in dietary fibre part of your daily diet. It keeps you feel full longer, thus aiding in weight management and preventing overweight – the main risk factor of diabetes.

Get your family to eat more fibre-rich foods!

- Choose whole grains instead of refined grain foods
- Consume legumes (beans, peas) at least once a day
- Always have fruits and vegetables at each meal
- Load half of your plate with vegetables at each meal
- Eat fresh fruits everyday with the skin too

Aim to take about 20-30g of dietary fibre daily!



1 cup chickpeas
= 12.5g fibre



1 slice wholemeal bread
= 4g fibre



1 cup guava
= 8g fibre



1 cup spinach
= 5.4g fibre



1 slice papaya
= 2.7g fibre

Keep Portion in Moderation

The amount of food you eat is as important as the type of food you choose.
Find out if you have been eating in moderation.

EXAMPLES OF ONE SERVING:

Rice, noodles, bread, cereals, cereal products and tuber (Eat 4-8 servings per day)



White rice,
1 cup

Wholemeal
bread,
2 pieces

Kuey teow,
wet, 1 cup

Cream
cracker,
6 pieces



Sweet potato,
1 cup

Potato,
2 whole

Putu mayam,
2 pieces

Fruits (Eat 2 servings per day)



Guava,
1/2 whole

Banana berangan
(medium)
1 whole

Banana emas,
2 whole



Apple,
1 whole

Papaya,
1 slice

Watermelon
1 slice

Vegetables (Eat 3 servings per day)



Green leafy
vegetables with
edible stem,
cooked, 1/2 cup

Tomato,
2 whole, medium



Cruciferous
vegetable, cooked,
1/2 cup

Ulam, raw,
1 cup

Fish (Eat 1 serving per day)



Ikan kembung,
1 medium

Ikan tenggiri
(14cm x 8cm x
1cm), 1 piece



Ikan bilis
(head removed),
2/3 cup

Keep Portion in Moderation

The amount of food you eat is as important as the type of food you choose.
Find out if you have been eating in moderation.

EXAMPLES OF ONE SERVING:

Poultry, meat and egg (Eat 1 serving er day)



Chicken drumstick,
1 piece



Egg (hen),
2 whole



Beef, lean,
(7.5cm x 9cm x 0.5cm)
2 pieces

Legumes (Eat ½-1 serving per day)



Chickpea, cooked,
1 cup



Green/mung bean,
cooked, 1½ cup



Tempeh,
2 pieces



Soya bean curd (tau-kua),
2 pieces

Milk and milk products (Eat 1-3 serving per day)



Cheese,
1 slice



Yoghurt,
1 cup (200ml)



Milk,
1 glass



Milk, powdered
(heaped),
4 dessert spoons

The Sweet Trap

Spot the sugar!

Sugars also have other names, like honey, raw sugar, confectioner's sugar, brown sugar, corn sweetener, corn syrup, fruit juice concentrate, fructose, dextrose, maltose & sucrose.

Sugar adds sweetness to your food and makes it taste nice. However, sugar has little nutritional value and it gives you extra calories which lead to weight gain – increase risk of diabetes.

How much sugar is in your favourite drinks & desserts?

Soft drinks (325ml per tin) 	 7-10 teaspoons (35-50g sugar)
Chocolate cake (110g per serving) 	 15 teaspoons (75g sugar)
Kuih koci (40 – 50g per piece) 	 2¼ teaspoons (11g sugar)
Doughnut (45 – 55g per piece) 	 1¾ teaspoons (9g sugar)
Ice cream (chocolate) (11 – 15g per popsicle) 	 2-3 teaspoons (10 – 15g sugar)
Candies (28g per serving) 	 4 teaspoons (20g sugar)
Cookies (34g per serving – approx. 3 pieces) 	 2 teaspoons (10g sugar)
Cup cake (110g per serving) 	 6 teaspoons (30g sugar)
Bingka ubi kayu (70 – 90g per piece) 	 4¼ teaspoons (21g sugar)

Tips on how to reduce sugar intake:

- Have a piece of fresh fruit instead of snacking on sugary snacks (doughnuts, cakes, pies)
- Read the food label and choose low sugar or reduced sugar products
- Remember that many desserts and local kuih contain large amounts of sugar

Let's Move it... Move it!

Physical activity helps to prevent chronic diseases such as type 2 diabetes, heart disease, high blood pressure and even certain cancers.

Everyday

- Doing household chores (e.g. mopping, car washing)
- Gardening
- Use stairs often
- Brisk walking

5-6 Times a Week

- Skipping rope
- Cycling
- Sports activities e.g. swimming, football, badminton

2-3 Times a Week

- Stretching
- Partial sit-ups

Limit

- Long hours on the computer
- Television watching time
- Driving to a short distance



Dangers of Diabetes

Uncontrolled diabetes can be dangerous; it can lead to health complications that can affect almost the entire body:

Lower limbs

- Loss of sensitivity

Diabetic foot

- Ulceration and amputation
- Look out for pain, numbness, and/or slow healing wound

Brain

- Stroke/cerebrovascular disease

Kidney failure

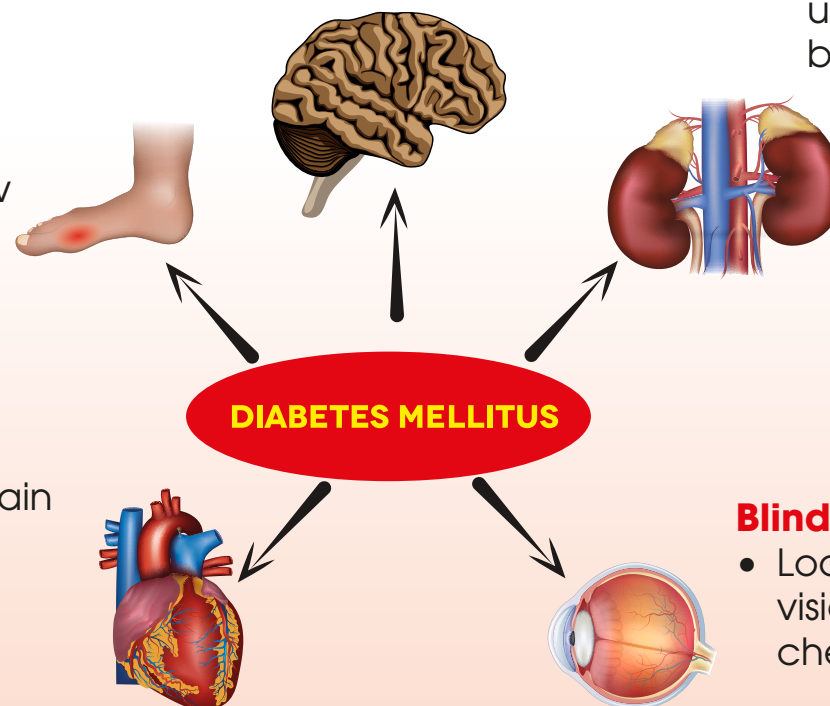
- Look out for the presence of protein in urine and/or rise of blood pressure

Heart disease

- Look out for chest pain and/or shortness of breath

Blindness

- Look out for change in vision and have your eyes checked regularly



Achieve your Diabetes Management Target

Your doctor and diabetes educator can help you in managing your diabetes effectively. Always ask them for advice. Here are some important recommendations that you should try to achieve to prevent diabetes complications.

Blood glucose

- 3.8 – 6.1 mmol/L (fasting)
- Less than 7.8 mmol/L (random)

HbA1c

- 6.5% or lower

Blood pressure

- Less than 130/80 mmHg

LDL-Cholesterol

- Less than 2.6 mmol/L

Triglyceride

- Less than 1.7 mmol/L

HDL-Cholesterol

- More than 1.02 mmol/L (male)
- More than 1.3 mmol/L (female)



Learn to Take Charge of Your Diabetes!



Eat sensibly

- Eat a balanced healthy diet, control your carbohydrate intake, load your plate with greens, reduce fat, sugar and salt intake, and choose wisely when eating out.



Be active

- Exercise helps your body to use insulin more effectively to take up glucose.



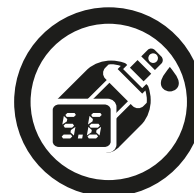
Maintain a healthy weight

- If you are overweight, losing just 5% of your body weight can improve your health.



Adhere to medication

- Skipping diabetes medication can cause fluctuations in blood glucose (too high or too low) which are dangerous and can lead to hospitalisation and even death if left untreated.



Monitor blood glucose

- Regular monitoring allows you to better manage diabetes and it helps prevent long-term complications.



Go for check-ups regularly

- See your diabetes doctor every three to six months to check your HbA1c level, blood pressure, blood cholesterol and triglycerides.
- Go for regular checks for your eyes, kidneys and feet every year to detect any diabetes complications early.



Ensure adequate sleep hours at night

- Get plenty of rest, sleep 7-8 hours everyday.



For more information on diabetes prevention and management, kindly refer to the guidebook **'Makan Sihat, Kekal Aktif: Cegah & Kawal Diabetes'**.

For more information on diet and nutrition, please visit the Nutrition Month Malaysia website at **www.nutritionmonthmalaysia.org.my**



Nutrition Society of Malaysia
www.nutriweb.org.my



Malaysian Dietitians' Association
www.dietitians.org.my



Malaysian Association for the Study of Obesity
www.maso.org.my

Nutrition Month Malaysia



For enquiries, please contact:

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Nutrition Month Malaysia is a nutrition education programme for the community observed every April of the year. This programme is a joint initiative of 3 non-profit professional bodies, namely Nutrition Society of Malaysia, Malaysian Dietitians' Association and Malaysian Association for the Study of Obesity.

Since its launch in 2002, NMM has always strives to promote greater awareness on healthy eating and active living among community. Some of the NMM activities include family carnival, school & kindergarten roadshows, publication of practical nutrition guidebooks and recipe books for public, publication of educational materials for children and educational press articles publications.

Visit our website to obtain more information on healthy eating and download free educational materials from the Nutrition Month Malaysia programme.

Email : enquiry@nutritionmonthmalaysia.org.my

Website : www.nutritionmonthmalaysia.org.my

Facebook : **Nutrition Month Malaysia**