

Department of  
**NUTRITION & DIETETICS**

# Fasting Safely For Ramadan



# Diabetes and Ramadan

## Understanding Diabetes and Ramadan

If you have diabetes, fasting during Ramadan may put you at risk of hypoglycaemia and dehydration. Many people with diabetes choose to fast during Ramadan, however it is important to understand how this may affect your blood glucose levels. If you are not on insulin or oral medications for your diabetes, you should be able to fast safely.

Fasting is not advisable if you:

1. Have frequent hypoglycaemia (low blood glucose).
2. Have recently been admitted for hypoglycaemia or Diabetic Ketoacidosis (DKA).
3. Have poorly controlled diabetes.
4. Have serious complications such as kidney disease, stroke, heart disease or uncontrolled hypertension.
5. Are pregnant or breastfeeding.

## Aims when Fasting with Diabetes

To fast safely, you should:

1. Prevent dehydration especially in Singapore's hot climate.
2. Prevent hypoglycaemia (low blood glucose) episodes especially just before Iftar.
3. Prevent hyperglycaemia after each meal.








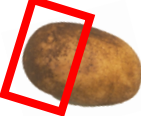









# Healthy Eating During Ramadan

Eating a healthy diet during Ramadan is important to help keep your blood glucose levels as near to normal as possible.

1. Divide your calories between Sahur, Iftar and if necessary, have one to two snacks.
2. Ensure that your meals are well balanced and avoid eating excessive carbohydrates.
3. Aim for two servings of fruits and at least two servings of vegetables daily.
4. Choose foods that are rich in fibre (e.g. brown rice, wholegrains, beans) as they release sugar slowly before and after fasting.
5. Limit your intake of refined sugars (e.g. sugar sweetened beverages, kuehs, pastries).
6. Minimise your intake of high fat foods and use less oil when cooking.
7. Stay hydrated between sunset and sunrise by drinking water and non-sweetened beverages.

# Which Foods Affect My Blood Glucose Levels?

## Starchy foods:

 <p><b>Brown rice/noodles/pasta</b> ~200g per rice bowl 1 serve = 1/4 bowl</p>  <p><b>Bread</b> ~30g per slice 1 serve = 1 slice</p>  <p><b>Chapati</b> ~60g per piece 1 serve = 1/2 piece</p>  <p><b>Biscuits</b> ~5g per piece 1 serve = 3 pieces</p>	 <p><b>Low fat milk</b> ~250ml per cup 1 serve = 1 cup</p>  <p><b>Yoghurt (low fat)</b> ~140g per small tub 1 serve = 1 small tub</p>  <p><b>Lentils/dhal (cooked)</b> ~225g per cup 1 serve = 1/2 cup</p>
 <p><b>Potato (cooked)</b> Medium: ~180g per piece 1 serve = 1/2 medium (size of one large egg)</p>  <p><b>Yam (cooked)</b> Medium: ~120g per piece 1 serve = 1/2 medium</p>  <p><b>Corn on the cob (cooked)</b> ~150g per cob 1 serve = 1/2 cob</p>  <p><b>Green peas</b> ~210g per cup 1 serve = 1/2 cup</p>  <p><b>Sweet potato (cooked)</b> ~120g per piece 1 serve = 1/2 piece</p>	 <p><b>Grapes</b> Small: ~5g per piece 1 serve = 15 small pieces or 8 big pieces</p>  <p><b>Papaya</b> ~150g per wedge 1 serve = 1 wedge</p>  <p><b>Pineapple</b> ~140g per wedge 1 serve = 1 wedge</p>  <p><b>Watermelon</b> ~220g per wedge 1 serve = 1 wedge</p>  <p><b>Apple/orange/pear</b> Big: ~220g per piece Small: ~145g per piece 1 serve = 1/2 big or 1 small</p>

\*Note: weight refers to weight of food in grams, not weight of carbohydrate

Rice, bread, cereals, chapati and starchy vegetables (e.g. potato and fruits) are digested and broken down into glucose, causing a rise in blood glucose levels two to three hours after each meal. Even though these foods make up a healthy diet, it is important to control your portion sizes when consuming them.



# Which Foods Affect My Blood Glucose Levels?

## Sugary foods:



Rock sugar, gula melaka, glucose, syrup, honey



Cordial, soft drinks, fruit juices, isotonic drinks



Canned fruits in syrups/juices



Hot desserts with coconut cream\*, ice-cream\*, kuehs\*, cakes\*



Sweets, chocolates\*, donuts\*



Malted drinks, condensed milk\*

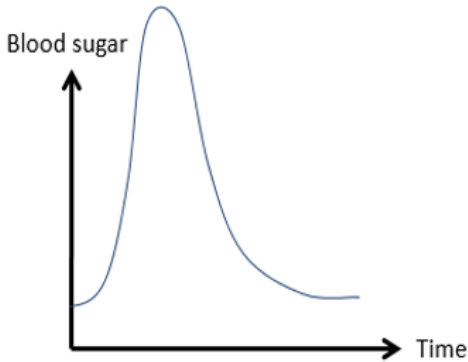
\*These foods are also high in fat

Refined sugars (added sugars to foods and beverages) are quickly absorbed, and cause a sudden increase in your blood glucose levels. It is best to limit these foods as they provide us with minimal vitamins and minerals.

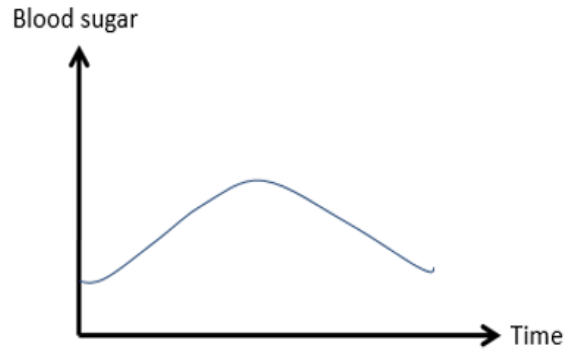
# Carbohydrates



## Sugary foods/drinks



## Starchy foods



## Sahur

1. Take Sahur as late as possible to minimise the period of fasting.
2. Hydrate yourself with unsweetened beverages.
3. Consume enough protein and fibre as they increase the feeling of fullness, making you feel full longer.



## Breaking Fast (Iftar)

Iftar should begin with one to two cups of unsweetened beverages to re-hydrate yourself. Limit yourself to one to two dates to prevent excessive rise in blood glucose levels.

Similar to Sahur,

1. Ensure that your meals are well balanced and avoid eating excessive carbohydrates.
2. Choose high fibre and low-fat protein dishes to help you feel full longer.
3. Limit your intake of refined sugars from desserts and sweetened beverages.

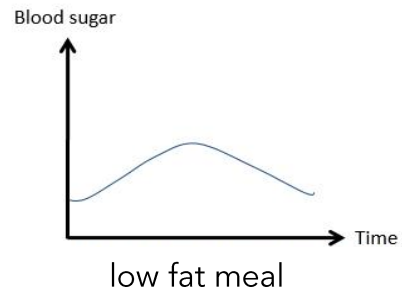
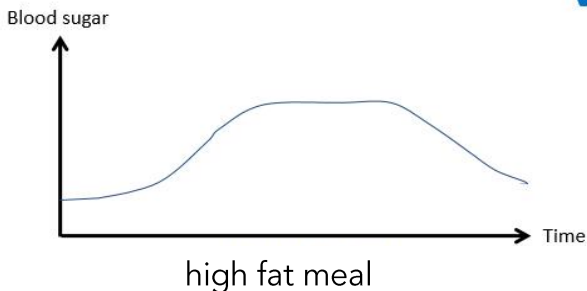


Mee Goreng



Rice with stir fried vegetables,  
steamed fish, no gravy

VS



High fat foods cause blood glucose levels to stay high for a longer time.

## Suitable Snacks Between Iftar and Sahur

Low calorie and minimal carbohydrate (CHO) snacks such as nuts or vegetables may be consumed.



Capsicum  
1/4 piece  
4g CHO, 21kcal

Baby carrot  
9 pieces  
4.5g CHO, 32kcal

Cherry tomato  
10 pieces  
3g CHO, 23kcal

Strawberry, raw  
1 cup  
4g CHO, 31kcal

Nuts  
30g  
5g CHO, 179kcal



Edamame  
1 cup  
~10g CHO, 104kcal



Diet jelly  
1 tub  
0g CHO, 10kcal



Agar-agar with artificial sweeteners  
10g agar-agar powder  
~10g CHO, 34kcal

Other snacks contain some carbohydrates but can be taken in smaller portions.



Plain crackers  
3 pieces = 15g CHO



Bread  
1 slice = 15g CHO



Oats (dry, instant/rolled)  
3 dsps\* = 15g CHO



Fruits  
1 serve = 15g CHO



Steamed chickpeas  
1/2 cup = 15g CHO



Plain low-fat yoghurt  
1 small tub  
= 15g CHO



Plain rice cakes  
3 pieces = 15g CHO



Plain popcorn  
3 cups = 15g CHO

\*dsps = dessert spoon



## Mindful Eating

It is important to practise mindful eating to prevent overeating after a long fast. Here are some tips:

- Eat slowly. Chew your food at least 15 times and enjoy every bite.
- Portion out appropriate food servings at the beginning of the meal and avoid having second helpings.
- Avoid eating snacks out of containers or bags. Portion some onto a plate so that you can see how much you are eating.
- Sit down at a table to have your meals instead of eating mindlessly in front of the television or computer.

## Ensure that You are Adequately Hydrated

Drink plenty of water, sugar-free or decaffeinated beverages to avoid dehydration, unless otherwise stated by your doctor.

Aim for six to eight cups of fluids between Iftar and Sahur.



Water  
0g CHO



Unsweetened black  
tea/coffee  
0g CHO



Diet soft drink  
0g CHO



Clear soup  
0g CHO



Soda water  
0g CHO



Low fat milk  
1 cup (250ml) = 13g CHO



Unsweetened soymilk  
1 cup (250ml) = 3-4g CHO

Taraweeh can be strenuous as it can cause dehydration, and lead to hypoglycaemia. Drink plenty of water after Iftar and bring a bottle of water and glucose treatment along with you in case you experience dehydration and hypoglycaemia episodes. 9

# Managing Blood Glucose Levels

## Blood Glucose Monitoring

You are advised to check your blood glucose levels frequently while fasting.

Recommended timings to check your blood glucose levels during Ramadan fasting:

1. Before Pre-dawn meal (Sahur)
1. Mid-morning from 10am-11am
2. Mid-afternoon from 3pm-4pm
3. Before Pre-sunset meal (Iftar)\*
4. Two to three hours after Iftar
5. At any time of the day when you experience symptoms of hypoglycaemia/hyperglycaemia or if you are feeling unwell

\*It is most common to experience hypoglycaemia before Iftar.

## Hypoglycaemia (Low Blood Glucose)

Fasting with insulin or oral medications may put you at risk of hypoglycaemia. It is important to inform your diabetes doctor that you are fasting so that he/she can adjust your medications accordingly.

Checking your blood glucose levels frequently as recommended by your doctor can prevent hypoglycaemia.



If you experience symptoms of hypoglycaemia or if your blood glucose level is below 4mmol/L, you should stop fasting and treat your symptoms.

# Managing Blood Glucose Levels

## Symptoms of Hypoglycaemia



If these symptoms are left untreated, it can lead to a loss of consciousness. Severe hypoglycaemia can lead to coma, and even death. When you experience hypoglycaemia symptoms, you should:

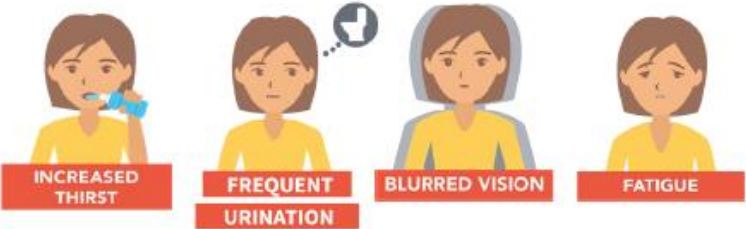

Step 1	Check your blood glucose level.
Step 2	<p>If it is less than 4mmol/L, take 1/2 cup of juice or regular soft drink            Or three sweets/glucose tablets            Or three teaspoons (15g) of sugar dissolved in water</p> 
Step 3	Wait for 15 minutes and re-check your blood glucose level.
Step 4a	<p>If it is above 4mmol/L, take a snack (1 serve of carbohydrate)            Or have your meal earlier.</p> 
Step 4b	If it is still less than 4mmol/L, repeat steps 2 and 3 until your blood glucose level is above 4mmol/L.

If hypoglycaemia keeps occurring, discontinue the fast and inform your diabetes doctor.

# Managing Blood Glucose Levels

## Hyperglycaemia (High Blood Glucose)

Symptoms of hyperglycaemia (high blood glucose level) and Diabetic Ketoacidosis (DKA):

High Blood Glucose	 <p>INCREASED THIRST</p> <p>FREQUENT URINATION</p> <p>BLURRED VISION</p> <p>FATIGUE</p>
DKA	 <p>NAUSEA AND VOMITTING</p> <p>SHORTNESS OF BREATH</p> <p>ABDOMINAL PAIN</p>

Hyperglycaemia can lead to dehydration. If you experience any of the above symptoms, test your blood glucose level. If your blood glucose level is more than 14mmol/L, you should break fast and drink water to prevent dehydration. If these symptoms are persistent and do not go away, please seek medical attention.



# Meal Plan

## Sahur

Brown rice &  
wholemeal bread

Meat and others

Vegetables

Fruit

Soup or beverage

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## Iftar

Brown rice &  
wholemeal bread

Meat and others

Vegetables

Fruit

Soup or beverage

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## Snack after

### Taraweeh

Brown rice &  
wholemeal bread

Fruit

Beverage

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Clinics B2  
TTSH Medical Centre, Level B2  
Contact:  
6357 7000 (Central Hotline)



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