A. Menarini Farmaceutica Internazionale SRL have developed and fully funded this leaflet for people living with diabetes. Tips and advice are of a general nature and are not intended to replace advice from your healthcare professional.

How to manage diabetes during Ramadan

A brief guide for people living with type 1 and type 2 diabetes

During the month of Ramadan, Muslims will abstain from all food and drink (including water) during daylight hours (dawn to sunset) and eat only two meals per day. 'Suhoor': the meal before dawn at the beginning of the fast. 'Iftar': the meal at sunset to mark the end of the fast

Fasting during Ramadan can include long periods without food and water, and people living with diabetes can be at risk of fluctuating blood glucose levels and dehydration. It is important to consider the possible risks carefully and discuss with your own healthcare team so that you can plan for keeping healthy during this time.

Managing diabetes during Ramadan

If you are planning on fasting and have diabetes, it is important to speak to your diabetes healthcare team as early as possible before Ramadan. For some people with diabetes, fasting can be dangerous or associated with some diabetes complications including:

- **Hypoglycaemia** (low blood glucose): fasting increases the risk of low blood glucose levels or "hypos".
- Hyperglycaemia (high blood glucose): this risk is increased with larger meals eaten at suhoor and iftar.
- Dehydration and thrombosis (formation of blood clots in the blood vessels): long hours of fasting also mean long periods without water – this puts people with diabetes at greater risk of dehydration and the problems related to dehydration such as blood clots.

Your diabetes team will be able to advise you on whether it is safe for you to fast or not, and whether you need any medication adjustments. People taking diabetes medications, especially those on sulfonylureas and/or insulin, should have their medications reviewed by their diabetes team before fasting.

If you are able to fast, your healthcare team will advise you on how to keep good diabetes control throughout the fasting period.

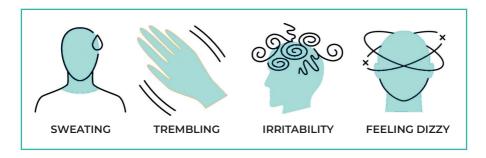
If you are advised by a medical practitioner that fasting would be potentially detrimental, then most religious authorities would agree that the individual should abstain from fasting. Exemptions are available for individuals with severe medical conditions, including those with diabetes.

Management of hypoglycaemia (low blood sugar levels)

Hypoglycaemia or "hypo" is when blood glucose levels fall below normal (less than 4.0 mmol/L).

People can experience hypos in different ways, but some of the common signs to look out for are:

- Sweating
- Trembling and Shaking
- Hunger
- Irritability
- Feeling dizzy



If you have any of the above symptoms whilst fasting, you must check your blood glucose level and stop fasting. Low blood sugar levels must be treated immediately with one of the following options (which all contain 15 to 20g of a fast-acting carbohydrate):

- 6 glucose or dextrose tablets
- five jelly sweets [which must contain glucose and/or dextrose]
- a sugary (non-diet) drink (150-200 ml) [which must contain glucose and/or dextrose]
- a small carton of pure fruit juice (150-200 ml)
- a tube of glucose gel

Blood glucose levels must be rechecked after 15 minutes and, if it is still less than 4.0mmol/L, the above treatment should be repeated.

After a hypo, eat or drink 15 to 20g of a slower-acting carbohydrate to stop glucose levels going down again. Examples are:

- sandwich
- piece of fruit
- bowl of cereal
- glass of milk

Self-monitoring of blood glucose (SMBG) is recommended during fasting. Religious authorities agree that glucose monitoring does not invalidate the fast and frequent SMBG does not break the fast. Regular SMBG may reduce the frequency and severity of hypoglycaemic episodes so that fasting can be performed safely.

Management of hyperglycaemia (high blood sugar levels)

You may develop high blood sugar levels during a fast if you miss your usual prescribed medication, if you have larger portions of starchy or sugary foods, or if you are less physically active than normal.

High blood sugars can increase your risk of dehydration which can make you feel dizzy and tired.

Before choosing to fast, ask your healthcare team what a high blood sugar level is for you. If you go above that level during fasting, you must break the fast by **drinking water and seek medical advice**. Without medical advice this could lead to diabetic ketoacidosis (DKA) – a serious condition requiring hospital treatment.

Food choices during Ramadan

For those who are able to fast during the month of Ramadan from sunrise meal (suhoor) to sunset meal (iftar) managing your diet is important. Your diet should be similar to the rest of the year, limiting high fat, fried and sugary foods and drinks.

It is important to eat a balanced diet at suhoor and iftar. Include foods from all the food groups and be sensible with portion sizes.

- Include combination of complex carbohydrates, protein and plenty of vegetables and dairy food at suhoor and iftar such as soups, chickpeas and yoghurt.
- Include wholegrain sources of carbohydrates such as oatbased cereals, brown rice and flour, multi-seeded breads, wholemeal flat breads and chapatis.
- Increase lean proteins such as pulses, beans, lentils, lean cuts of meat, poultry, fish, eggs, nuts and seeds.
- Limit the amount of sugary foods and drinks such as sweets, halwa, baklawa, fruit juices, rose water syrup and milkshakes.
- Be mindful of sugar content in fruit and dried fruit, limit dates to 1 or 2 at iftar. It is best to take fruit as a whole and avoid smoothies or juice where possible.
- Choose healthy methods of cooking such as grilling and baking.

Drinking plenty of fluids

Long fasts will put people living with diabetes at risk of dehydration.

- Drink plenty of water (at least 1.5L) at suhoor and iftar meal times, as well as at non-fasting hours.
- Sugary drinks, syrup and milkshakes should be avoided, as these will increase blood glucose levels. Plain yoghurt drinks, vegetable smoothies, water or herbal drinks are a better choice.
- Caffeinated drinks such as coffee, coke/cola drinks, should be avoided as these can cause dehydration.

Moderate exercise during Ramadan

Whilst fasting, moderate to high intensity exercise will increase the risk of dehydration and hypos in people with diabetes, especially those on treatment with insulin and sulfonylureas.

During Ramadan, exertion during additional prayers can increase the risk of hypos and dehydration.

General advice for people with diabetes at Ramadan:

- Carry glucose treatment and water.
- Eat the evening meal before going for prayers and take a bottle of water with you during prayers.
- Include starchy carbohydrate foods in the meal to prevent low blood sugar levels.

In summary

Before choosing to fast, seek medical advice from your healthcare team to create your diabetes management plan during Ramadan. It is important that people living with diabetes understand the risk of fasting and how to fast safely.

Further information:

www.diabetes.org.uk/guide-to-diabetes/managing-your-diabetes/ramadan





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