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For enquiries and appointments,
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Healthy Diet to Manage Your Blood Glucose



What Is Diabetes?

Diabetes is when the body cannot use blood glucose effectively, resulting in an abnormally high blood glucose level. This happens when the body cannot react to insulin appropriately or when there is a lack of insulin produced by the pancreas.

Function of Insulin

What we commonly refer to as “blood sugar” is the glucose in our blood. After each meal, sugars and carbohydrates in foods are absorbed and turned into blood glucose, causing the blood glucose level to rise. Insulin then acts as a key and opens the “door” of various organ cells, allowing the glucose in blood to be transported into cells and to be either converted into energy or stored as muscle glycogen, liver glycogen or fat for future use.

Symptoms

There can be no obvious symptoms for diabetes, and some patients only find out after body check.

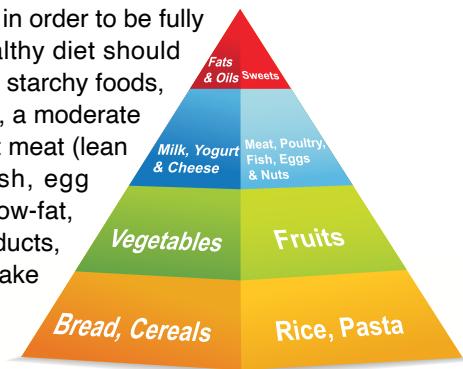
Here are some common symptoms related to diabetes:

- Frequent urination and increased urine volume
- Excessive thirst
- Fatigue
- Increased appetite
- Rapid weight loss
- Itchy skin
- Higher propensity to vaginal infection and thus vaginal discomfort
- Eyesight problems
- Wounds are highly infectious and take longer to heal
- Pain, weakness or numbness in the feet

Basic Principles of Diabetes Diet Treatment

A balanced diet with a wide variety of food to assimilate enough nutrients

To maintain general health, a balanced diet is necessary in order to be fully nourished. A healthy diet should include high-fibre starchy foods, fruits, vegetables, a moderate amount of low-fat meat (lean pork, poultry, fish, egg white, etc.) and low-fat, high-calcium products, and a minimal intake of high-fat, high-sugar and high-salt foods.



Regular portions and meal patterns to maintain a desirable blood glucose level

When carbohydrates are digested and absorbed, they are converted into blood glucose, which in turn raises the blood glucose level. Therefore, diabetic patients must regulate their carbohydrate intake, and spread out the consumption of carbohydrate-dense foods throughout the day among breakfast, lunch, dinner and snacks between meals. This helps control the blood glucose level, thus minimising the risk of acute diabetes-related illnesses, such as hypoglycemia and diabetic coma. This is especially important for those who undergo insulin injections and drug treatments.

Limited intake of high-sugar foods, sweets and desserts

Sugar is a type of carbohydrates. Generally speaking, high-sugar foods contain a high level of carbohydrates, thus the consumption of even a small amount would cause blood glucose to rise rapidly. In addition, high-sugar foods often lack nutrients, and it is therefore beneficial to minimise their intake. If you intend to consume the food items below, you are advised to consult a registered dietitian on how to adjust your intake of other carbohydrates.

High-sugar foods include:

- **Sugars**
 - White sugar (various types), light brown sugar, coffee sugar, brown sugar, honey, rock sugar, cane sugar, fructose (try to replace sugars with artificial sweeteners)
- **Sugary drinks**
 - Condensed milk, chocolate milk, flavoured milk and drinks, milkshakes, soft drinks, fruit juices, yoghurt drinks, sports drinks, sweetened milk tea and coffee
- **Tinned and preserved fruits**
 - Tinned and preserved fruits with syrup, sweetened dried fruits, candied ginger, preserved prunes, sweet plums, licorice lemon, haw flakes
- **Chinese desserts and pastries**
 - Sweet soups, egg custard, milk pudding, mooncakes, brown sugar glutinous rice cakes, chestnut cakes, pastries, candies
- **Western desserts and cakes**
 - Cheesecakes, pies, tarts, cookies, jelly, pudding, ice cream, mousse
- **Sugary sauces**
 - Ketchup, sweet sauce, plum sauce, sweet and sour sauce, hoisin sauce, oyster sauce, barbeque sauce, jam
- **Sugary soup ingredients**
 - Dried dates, dried longans, candied dates, candied winter melons, dried figs

Moderate intake of starchy foods

Starch is a type of carbohydrates. In our diet many foods contain starch, most of which are rich in nutrients. Therefore we cannot exclude starch from our diet. Registered dietitians would guide you on your starchy food portions in order to control the blood glucose level. Remember to balance the starchy food portions per meal accordingly.

Foods that are high in starch:

- Grains, such as rice, noodles, pasta, bread, oats, biscuits
- Root vegetables, such as potatoes, pumpkins, sweet potatoes, yams, lotus roots, carrots, corn
- Dried beans and bean products: red / green beans, black eyed peas, rice beans, lily bulbs, kidney beans, hyacinth beans, vermicelli
- Fruits, such as grapes, oranges, bananas, apples
- Soya bean products, such as sweetened soya milk, soy yoghurt, cooked soya beans
- Dairy products, such as fresh milk, evaporated milk, milk powder, yoghurt



Good intake of fibre-dense foods

Fibre is another type of carbohydrate. Fibre cannot be absorbed by the human body, thus does not raise blood glucose level. In fact, it helps control the blood glucose level and keep the heart and digestive system healthy. Therefore, diabetics should choose to eat more fibre-rich foods, such as grains, whole wheat, oatmeal, vegetables, fruits and beans. According to the American Dietetic Association, everyone should consume at least 25 to 35g of fibre per day.

Fibre-dense foods include (2 to 4g of fibre per half a bowl):

- **Grains**
 - Red rice, brown rice, black rice, barley, groat, oatmeal, rye, whole-meal biscuits, high-fibre biscuits, All Bran, high-fibre breakfast cereals
- **Vegetables**
 - Broccoli, eggplant, spinach, Chinese kale, hairy gourd, cabbage, bok choy, lettuce, Shanghai greens, most types of leafy greens (2 bowls or more a day)
- **Fruits**
 - Oranges, tangerines, apples, pears, peaches, blueberries (2 to 3 servings a day)
- **Dried beans**
 - Kidney beans, red beans, green beans, black eyed peas, black beans, hyacinth beans

Limit high-fat foods, especially animal fats

While foods that are high in fat do not affect the blood glucose level directly, they make it harder for blood sugar to drop after meals, which sometimes results in persistently high levels of blood glucose. In addition, long-term high fat intake affects the function of insulin, making it difficult to control the blood glucose level. A high intake of fats, especially saturated fats in animal meat, can increase your risk of cardiovascular diseases and cancer.

Choose light dishes with less oil and salt

Whether you are eating at home or dining out, methods of food preparation such as steaming, boiling, slow cooking or baking are preferable. Try to use less sugar, salt and flavourings when seasoning. Avoiding extra sauce with rice, for instance, would help reduce fat and sugar intake.

For a detailed nutrition assessment and individualised diet plan, please contact our dietitians.

