

## VII. 控制糖尿病的方法：

### A. 糖尿病飲食計劃

如果你腎臟功能有問題，你需要遵從特別的飲食計劃，限制鉀，鈉，磷和蛋白質的攝入量。你可以向你的醫生或註冊營養師諮詢有關合乎你病情的適當膳食計劃。

#### 糖尿病飲食規則

1. 定時飲食及保持良好的飲食習慣，每日應包括三小餐及一至兩次的小吃，並選擇合適的食物種類及適當的份量。最好每隔四至五小時吃一小餐。
2. 多選擇含纖維素高的食物，如糙米 (brown rice)、乾豆類 (黃豆、眉豆、黑豆等)、全麥麵包 (100% whole wheat)、麥片 (oatmeal)、鮮果和蔬菜等。
3. 選擇低脂肪蛋白質類食品，如瘦的肉類、魚類、海鮮、雞胸肉、豆腐和蛋白等。肉類應切除脂肪和皮。適量進食果仁、種子 (瓜子) 和花生醬等。每日進食大約五到七安士蛋白質。
4. 多選用蒸、灼、炆、煲和烤的烹飪方法。
5. 烹飪時可用少量的植物油，如菜籽油 (canola oil) = 或橄欖油 (olive oil) 等。每日可進食五到六茶匙油。

## VII. Management of Diabetes

### A. Diabetes Meal Planning

If you are already having problems with your kidneys, you will need to follow a more specialized diet which limits your intake of potassium, sodium, phosphorous and protein. Consult with your doctor or a registered dietitian regarding an appropriate meal plan for your condition.

#### Principles of Diabetes Meal Plan

1. Eat at regular times and maintain healthy eating habits. Consume 3 small meals and 1-2 snacks daily. Include appropriate servings from each food group at each meal. Ideally, you should eat every 4-5 hrs.
2. Include foods high in fiber such as brown rice, dried beans, whole grain breads and cereals, fresh fruits, and vegetables.
3. Choose protein foods low in fat such as lean meats, fish, seafood, chicken breast, tofu, and egg white. Remove all visible fat and skin from meat. Nuts, seeds, and peanut butter may be eaten in moderation. Aim for 5 to 7 ounces of protein per day.
4. Prepare foods by steaming, braising, boiling, or baking.
5. Use a small amount of vegetable oil in cooking. Choose canola oil or olive oil. About 5 to 6 teaspoons of oil may be used daily.

6. 多選用低鈉質的調味品及配料，如芹菜、蒜頭、薑、青椒、洋蔥、香菜、芫茜、香草、胡椒、咖喱粉、五香粉、花椒、八角、辣椒、醋和檸檬汁等。
7. 可以適量選擇無糖飲品或食品 (Diet or sugar free)、清湯、咖啡和茶等。
8. 減少用糖類，如砂糖、黃糖、冰糖和蜜糖等。若要加糖可用適量假糖代替，如 Sweet & Low, Equal, Splenda 等。
9. 減少進食含糖的食品，飲品或調味品，如甜豆奶、波霸奶茶、汽水、煉奶、甜包、果醬、糖果及各類甜品、甜酸食物、燒烤醬、番茄醬、海鮮醬、甜麵醬、酸梅醬和蠔油等。
10. 減少吃白飯，粥，糯米及米類製品，如腸粉、米粉、河粉、粽、湯丸、年糕。
11. 減少吃高澱粉質的水果，如香蕉及榴槤。
12. 以下的食物，含高澱粉質及糖份 (碳水化合物)，需酌量食用。

飯、麵、粥、粉、麵包、麥片、餅乾、番薯、薯仔、芋頭、淮山、薏米、葛、粟米、青豌豆和乾豆類等	每餐大約一碗飯/麵/麥片或二片麵包 (一碗 = 八安士)
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水果	每日二至三個小型水果
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牛奶 (脫脂 Fat Free 或 1% 低脂 Low fat) 或加鈣純豆奶	每日大約二杯 (一杯 = 八安士)
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6. Use low sodium seasonings: celery, garlic, ginger, green pepper, onion, parsley, cilantro, herbs, black pepper, red pepper, curry powder, five spice powder, peppercorns, anise, chili pepper, vinegar, and lemon juice.
7. Sugar-free products, diet soda, broth, coffee, and tea may be consumed in moderation.
8. Reduce sugar (white sugar, brown sugar, corn syrup, honey) in foods or beverages. Sugar substitutes such as Sweet'N Low, Equal, or Splenda can be used in moderation to provide sweetness.
9. Reduce sugar-containing beverages, foods, and condiments such as sweetened soy drinks, bubble tea, soda, condensed milk, sweet buns, jams, candies, desserts, sweet and sour foods, BBQ sauce, ketchup, hoisin sauce, sweet bean paste, plum sauce, and oyster sauce.
10. Limit white rice, rice porridge, glutinous (sticky) rice and rice products such as rice noodles (cheong-fun, mei-fun, ho-fun), zong, rice balls, and rice cakes.
11. Eat less of starchy fruits such as bananas and durian.
12. The following foods contain mostly starches and sugars (carbohydrates) and should be consumed in moderate amounts:

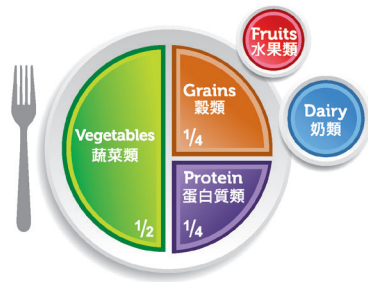
Rice, rice porridge, rice noodles, bread, cereal, crackers, potato, yam, taro, corn, barley, gourd, green peas, dried beans	Approx. 1 cup cooked rice/noodle/cereal or 2 slices bread per meal 1 cup = 8 oz.
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Fruits	2-3 small fruits per day
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Milk (fat free or 1% low fat) or unsweetened soymilk with calcium	Approx. 2 cups per day 1 cup = 8 oz.
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13. 有時可飲用半杯 (四安士) 純果汁以代替一個水果。
14. 減少吃含有高膽固醇的食品，如內臟 (肝、腎、腰、腦、舌)、蛋黃、蝦、蟹、龍蝦、貝殼類、墨魚和魷魚等。
15. 減少吃動物脂肪 (豬油、雞油、牛油)、煎炸食物、點心、人造牛油和沙律醬等。減少用椰汁作配料。
16. 減少吃鹹 (高鈉質) 的食物和調味品，如鹹蛋、鹹魚、火腿、香腸、臘味、罐頭食品、鹽、豉油、魚露、蠔油、味精、豆豉、辣椒醬、豆瓣醬、蝦醬和腐乳等。
17. 避免空腹喝酒，以免引起低血糖反應。

Choose **MyPlate**.gov



Use the MyPlate icon as a guide to plan your meal

On a 9" plate:  
 $\frac{1}{2}$  = vegetables  
 $\frac{1}{4}$  = grains  
 $\frac{1}{4}$  = protein

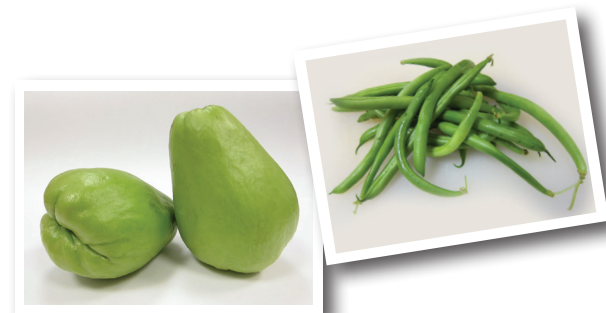
May include a small fruit and a cup (8 oz) of milk or soy milk

使用“MyPlate”營養建議指引來計劃你的餐膳

以一個9英吋大小的碟來計算:  
 $\frac{1}{2}$  = 應該是蔬菜類  
 $\frac{1}{4}$  = 應該是穀類  
 $\frac{1}{4}$  = 應該是蛋白質類

另外可以加一個小型水果及一杯 (8 安士) 牛奶或豆奶

13. 4 oz. (1/2 cup) of 100% unsweetened fruit juice may be substituted for 1 serving of fruit occasionally.
14. Eat less of high cholesterol foods such as organ meats (liver, gizzard, kidney, brain, tongue), egg yolk, shrimp, crab, lobster, shellfish, cuttlefish, and squid.
15. Reduce animal fats (lard, chicken fat, butter), fried foods, dim sum, margarine, mayonnaise, and salad dressing. Limit coconut milk.
16. Limit salty (high sodium) foods and condiments such as salted egg, salted fish, ham, sausage, preserved meats, canned foods, salt, soy sauce, fish sauce, oyster sauce, MSG, fermented black beans, chili sauce, bean paste, shrimp paste, and fermented bean curd.
17. Avoid drinking alcohol on an empty stomach as it may cause low blood sugar.



### 如何計算碳水化合物 (Carbohydrate) 的份量

碳水化合物是食物裏升高血糖的主要成分。患有糖尿病的人不單要注意所進食的甜品及糖類，也應該注意碳水化合物的攝入量。

碳水化合物主要來源於澱粉類的食物 (如，米飯、麵、薯仔、穀類、麵包、乾豆類)，水果，牛奶和某些蔬菜 (如，玉米、青豌豆、胡蘿蔔)。當你閱讀食物營養標籤時，應了解每一份量的碳水化合物總含量，而不要只單純考慮糖份的含量。要牢記，四克 (gram) 的碳水化合物相當於一茶匙的糖。

最好將含碳水化合物的食物分成小餐吃，並在每次進餐或小吃時均衡份量並留意碳水化合物的攝入量。一般建議每餐攝取碳水化合物 45 至 60 克，小吃則 15 至 20 克均較為合宜。



開始進餐之後兩小時，測量一下你的血糖值，以便了解那一種食物會影響你的血糖度數，以及攝取多少碳水化合物較為合適你。

參考碳水化合物含量的圖表來協助你計劃你的餐膳，並向註冊營養師諮詢有關合適你個人的飲食餐單。

### Carbohydrate Counting

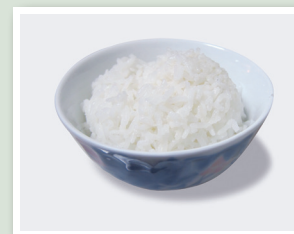
Carbohydrates are the primary nutrients in foods that raise blood glucose. People with diabetes need to watch their total carbohydrate intake, as well as that of sweets and sugars.

Carbohydrates come from starchy foods (e.g. rice, noodles, potato, cereal, breads, dried beans), fruits, milk and certain vegetables (e.g. corn, peas, carrots). When reading a food label, consider the total carbohydrate per serving rather than the amount of sugar in a product. Keep in mind that 4 grams of carbohydrate is equivalent to about a teaspoon of sugar.

It is a good idea to spread your carbohydrate foods into small frequent meals and keep the amount of carbohydrates consistent at each meal and snack.

The general guideline is to include 45-60 grams of carbohydrate per meal and 15-20 grams per snack.

By checking your blood sugar 2 hours after the start of a meal, you can see how a particular food affects your blood glucose reading and whether the amount of carbohydrates eaten is appropriate for you.



Use the carbohydrate content list to assist with meal planning and consult a registered dietitian if you need help designing a personalized diet.

## 糖尿病飲食餐單樣本

(1200 卡路里/熱量)

碳水化合物 (克)

早餐	一平碗	麥片	27
	一杯	脫脂牛奶	12
小吃	一個 (小型)	水果	15
	一個	煮熟的雞蛋	1
午餐	半碗	麵	20
	兩安士	瘦的肉類	0
	一碗	蔬菜	5
	一茶匙	油	0
小吃	一個 (小型)	水果	15
	一安士	無鹽杏仁	6
晚餐	半碗	糙米飯	23
	兩安士	魚	0
	兩安士	豆腐	4
	一碗	蔬菜	5
	一茶匙	油	0

## Sample Diabetes Meal Plan

(1200 calories)

Carbohydrates (gm)

BREAKFAST	1 c.	Oatmeal	27
	1 c.	Fat free milk	12
SNACK	1	Small fruit	15
	1	Hard boiled egg	1
LUNCH	½ c.	Noodles	20
	2 oz.	Lean meat	0
	1 c.	Cooked vegetable	5
	1 tsp.	Oil	0
SNACK	1	Small fruit	15
	1 oz.	Unsalted almonds	6
DINNER	½ c.	Brown rice	23
	2 oz.	Fish	0
	2 oz.	Tofu	4
	1 c.	Cooked vegetable	5
	1 tsp.	Oil	0



## 糖尿病飲食餐單樣本

(1500卡路里/熱量)

碳水化合物 (克)

早餐	一平碗	麥片	25
	一隻	煮熟的雞蛋	1
	一杯	脫脂奶	6
小吃	一個 (小型)	水果	15
	一安士	無鹽杏仁	6
午餐	一平碗	麵	40
	二安士	瘦的肉類	0
	一碗	蔬菜	5
	一茶匙	油	0
小吃	一個 (小型)	水果	15
	三安士	小胡蘿蔔	7
晚餐	一平碗	糙米飯	45
	兩安士	魚	0
	兩安士	豆腐	4
	一碗	蔬菜	5
	一茶匙	油	0

## Sample Diabetes Meal Plan

(1500 calories)

Carbohydrates (gm)

BREAKFAST	1 c.	Oatmeal	25
	1	Hard boiled egg	1
	1 c.	Fat free milk	6
SNACK	1	Small fruit	15
	1 oz.	Unsalted almonds	6
LUNCH	1 c.	Noodles	40
	2 oz.	Lean meat	0
	1 c.	Cooked vegetable	5
	1 tsp.	Oil	0
SNACK	1	Small fruit	15
	3 oz.	Baby carrots	7
DINNER	1 c.	Brown rice	45
	2 oz.	Fish	0
	2 oz.	Tofu	4
	1 c.	Cooked vegetable	5
	1 tsp.	Oil	0



有關份量的縮略語：

**Abbreviations:**

<b>gm.</b>	= 克	<b>Gram</b>
<b>oz.</b>	= 安士	<b>Ounce</b>
<b>c.</b>	= 杯 (八安士)	<b>Cup (8 oz)</b>
<b>sl.</b>	= 片	<b>Slice</b>
<b>tsp.</b>	= 茶匙	<b>Teaspoon</b>
<b>med.</b>	= 中型	<b>Medium</b>



一般食品碳水化合物 (澱粉質及糖) 成份

**Carbohydrate (Starch & Sugar) Content of Common Foods**

澱粉質類 (煮熟)		份量	碳水化合物 (克)	熱量
STARCHES, COOKED		AMT	CARBOHYDRATE (gm)	CALORIES
白飯	White rice	1c.	44	205
糙米飯	Brown rice	1c.	45	216
糯米飯	Glutinous rice	1c.	53	242
餃子	Dumplings	7-8	40	240
河粉	Ho-fun	1c.	50	240
米粉	Mei-fun	1c.	50	230
瀨粉	Lai-fun	1c.	44	190
粉絲	Bean thread (Fun-see)	1c.	45	200
麵	Noodles	1c.	40	200
意大利粉	Spaghetti	1c.	39	92
通心粉	Macaroni	1c.	40	197
麥皮	Oatmeal	1c.	25	145
薏米	Barley	1c.	44	193
白麵包	White bread	1sl.	15	70
麥麵包	Wheat bread	1sl.	12	70
餅乾	Crackers	5	11	60
黃豆	Soy beans	1c.	17	298
蠶豆	Lima beans	1c.	39	217
黑豆	Black beans	1c.	41	221
眉豆	Black-eyed peas	1c.	35	190

鮮果類 FRUITS, FRESH		份量 AMT	碳水化合物 (克) CARBOHYDRATE (gm)	熱量 CALORIES
蘋果	Apple	1 med.	19	72
杏	Apricots	3	12	51
雪梨	Asian pear	1 med.	13	51
香蕉	Banana	1 med.	28	105
香瓜	Cantaloupe	1c.	13	57
車厘子	Cherries	10	11	49
榴槤	Durian	3 oz.	28	147
葡萄	Grapes	18	14	57
西柚	Grapefruit	½ med.	10	40
蜜瓜	Honeydew	1c.	15	60
奇異果	Kiwi	1 med.	11	46
龍眼	Longan	10	5	20
枇杷果	Loquats	10	12	47
荔枝	Lychee	10	16	66
芒果	Mango	½ med.	18	67
桃李	Nectarine	1 med.	16	67
橙	Orange	1 med.	16	65
桃	Peach	1 med.	10	37
啤梨	Pear	1 med.	25	98
柿子	Persimmon	1 med.	8	32
黑李	Plum	1 med.	8	36
木瓜	Papaya	½ med.	15	60
菠蘿	Pineapple	1c.	19	77
沙田柚	Pummelo	1c.	18	71
士多啤李	Strawberries	1c.	10	45
柑	Tangerine	1 med.	9	37
西瓜	Watermelon	1c.	11	50

乾果類 FRUITS, DRIED		份量 AMT	碳水化合物 (克) CARBOHYDRATE (gm)	熱量 CALORIES
杏脯	Apricots	5	11	40
蜜棗	Dates	5	30	114
無花果	Figs	5	61	238
西梅	Prunes	5	26	100
葡萄乾	Raisins	1/3 c.	40	150
蔬菜類 (煮熟) VEGETABLES, COOKED				
蘆筍	Asparagus	1c.	8	44
竹筍	Bamboo shoots	1c.	2	15
豆芽	Bean sprouts	1c.	5	26
西蘭花	Broccoli	1c.	8	44
白菜	Bok choy	1c.	3	16
紅蘿蔔	Carrots	1c.	16	70
玉米 *	Corn *	1c.	41	180
芹菜	Celery	1c.	6	26
椰菜	Cabbage	1c.	7	32
椰菜花	Cauliflower	1c.	6	30
青瓜 (生)	Cucumber, raw	1c.	3	14
茄子	Eggplant	1c.	6	26
葛 *	Gourd *	1c.	25	100
豆角	Green beans	1c.	10	44
生菜 (生)	Lettuce, raw	1c.	2	10
蓮藕	Lotus root	10 sl.	15	60
芥菜	Mustard green	1c.	3	22
紹菜	Napa cabbage	1c.	8	36



蔬菜類 (煮熟)	份量	碳水化合物 (克)	熱量	
VEGETABLES, COOKED	AMT	CARBOHYDRATE (gm)	CALORIES	
洋蔥	Onions	1c.	14	60
南瓜 *	Pumpkin *	1c.	12	48
青碗豆 *	Peas *	1c.	25	134
馬鈴薯 *	Potato *	1 med.	22	93
蕃薯 *	Sweet potato *	1 med.	34	148
菠菜	Spinach	1c.	7	42
節瓜	Wax gourd	1c.	8	36
草菇	Straw mushroom	1c.	8	60
冬菇	Dried mushroom	4	10	40
芋頭 *	Taro *	4 oz.	46	188
蘿蔔	Turnip	1c.	8	28
蕃茄 (生)	Tomato, raw	1 med.	6	26
西洋菜	Watercress	1c.	0.5	4
馬蹄	Water chestnut	1c.	30	130

\* = Starchy Vegetables (高澱粉質瓜菜)

#### 飲料

飲料	份量	碳水化合物 (克)	熱量	
DRINKS	AMT	CARBOHYDRATE (gm)	CALORIES	
汽水	Soda, regular	1 can (12 oz.)	40	150
葡萄酒	Wine	4 oz.	<2	70
啤酒	Beer	12 oz.	12	145
烈酒	Liquor	1 oz.	0	82
茶	Tea	1c.	0	0
咖啡	Coffee	1c.	0	0
果汁	Fruit juice	1c.	26-42	105-170
蔬菜汁	Vegetable juice	1c.	11	56
牛奶	Milk	1c.	12	90-180
淡豆漿	Soymilk (unsweetened)	1c.	4	79

糖	份量	碳水化合物 (克)	熱量	
SUGARS	AMT	CARBOHYDRATE (gm)	CALORIES	
沙糖	White sugar	1 tsp.	4	15
黃糖	Brown sugar	1 tsp.	4	17
蜜糖	Honey	1 tsp.	5	21
果醬	Jam	1 tsp.	4	16
糖漿	Syrup	1 tsp.	5	20

#### 其他

其他	份量	碳水化合物 (克)	熱量	
OTHERS	AMT	CARBOHYDRATE (gm)	CALORIES	
蛋	Egg	1	0	75
肉類	Meat	3 oz.	0	150-250
魚類	Fish	3 oz.	0	70-120
果仁	Nuts	1 oz.	4-7	160-200
栗子	Chestnuts	1 oz.	14	64
白果	Ginko nuts	1 oz.	11	52
蓮子	Lotus seeds	1 oz.	18	94
花生醬	Peanut butter	1 tsp.	1	35
油	Oil	1 tsp.	0	45
豆腐	Tofu (bean curd)	4 oz.	4	100



## B. 體力活動與糖尿病

### 運動的益處

- 可減低血糖的度數
- 可減低甘油三酯的度數
- 增加高密度膽固醇 (好膽固醇) 的度數
- 改善胰島素的作用
- 增強你的肌肉，骨質和其他身體的重要器官
- 使你精力充沛
- 幫助你減輕體重或保持健康的體重
- 舒緩焦慮及憂鬱
- 減低患上心臟病，中風，高血壓以及某些癌症的機會

保持運動並注意飲食，可減低你身體對胰島素或降血糖藥物的需求及依賴。

### 運動前後以及運動中要注意的事項

在開始任何運動計劃之前，先請你的醫生為你做詳細的身體檢查，以免使併發症更加惡化。

#### 運動前：

- 檢查血糖。如果你的血糖低於 100mg/dl，在運動之前，要進食額外的澱粉質類食物，如麵包或米飯等。
- 檢查你的足部是否有毛病。切記穿著適合你運動類型的鞋子。
- 做 5-10 分鐘熱身運動。開始時先做輕度的健身運動，如步行，然後伸展肌肉等。

## B. Physical Activity and Diabetes

### Benefits of Exercise

- Lowers blood glucose levels
- Lowers triglyceride levels
- Increases HDL (good) cholesterol
- Helps cells respond better to insulin
- Strengthens your muscles, bones, and other vital organs in the body
- Increases your energy level
- Helps you lose weight, or maintain a healthy weight
- Reduces anxiety and depression
- Reduces your risk of heart disease, stroke, high blood pressure, and some types of cancers

Combined with a healthy diet, regular physical activity may lower your need for insulin or diabetes medications.

### Precautions Before, During, and After Exercise

Before starting any exercise program, it is important that your health care providers check your health condition thoroughly to avoid risk of worsening complications.

#### Before exercise:

- Check your blood glucose level. If your blood sugar is lower than 100 mg/dl, eat additional starchy foods such as bread or rice before beginning to exercise.
- Inspect your feet for foot problems. Make sure you wear proper footwear for the type of exercise you choose.
- Warm-up for 5-10 minutes. Start with low-intensity aerobic activity, such as walking, followed by stretching of your muscles.

運動中：

- 要做到運動中也可以毫無困難地與人談話
- 為免身體缺水，應帶備飲用水，尤其在天氣炎熱時。身體缺水可使血糖升高影響心臟功能。
- 應隨身帶備碳水化合物補充食品，如葡萄糖片，果汁或餅乾等以預防低血糖或在低血糖時服用，特別在進行長時間的運動時。
- 在太炎熱或太寒冷的日子裏最好不要運動。
- 如覺得眩暈，胸悶，呼吸困難或噁心，應馬上停止運動。
- 最好隨身帶上糖尿病人的確認手環 (I.D. Band) 以防發生緊急意外時可辨別你患有糖尿病。

運動後：

做放鬆運動使心臟回復運動前的狀態。放鬆運動與熱身運動很相似。記得運動後也要測量血糖的度數。

### 運動時間的長短

每個人的運動時間或頻密程度要視乎各人的年齡，性別，健康情況以及平日的運動習慣等因素來確定。專家建議，通常每天運動 30 分鐘較為合適。如果你剛剛開始進行有規律的運動，則應從做 5-10 分鐘的運動開始，然後慢慢增加至 30 分鐘。如果你需要減輕體重，應盡量每日做到 60 至 90 分鐘的運動。

During exercise:

- You should be able to carry a conversation without difficulty while working out.
- Carry a water bottle with you to keep hydrated, especially when it is hot. Dehydration can increase blood sugar levels and affect heart function.
- Carry a source of carbohydrate, such as glucose tablets, fruit juice, or crackers, to treat or prevent low blood sugar, especially during prolonged activities.
- Do not exercise in extreme hot or cold weather.
- Stop exercising if you experience lightheadedness, chest tightness, severe shortness of breath, or nausea.
- Wear a diabetes identification band in case of emergency.

After exercise:

Do cool-down exercises to allow your heart rate to gradually return to pre-exercise level. Cool-down exercises are similar to warm-up exercises. Remember to check your blood glucose after exercising.

### Length of Exercises

How long and how often you should exercise depends on your age, sex, health condition, and level of fitness. Generally, 30 minutes of physical activity on most days of the week is recommended. If regular physical activity is something new to you, start with 5-10 minutes of exercise, and gradually increase to 30 minutes a day. If you need to lose weight, aim for 60-90 minutes of exercise daily.

## 運動的類型

糖尿病患者，特別是那些因糖尿病而有眼部或足部問題的人仕，在選擇運動類型時更要注意，以免因為選擇不當而加深對眼睛或足部的損害。

建議的運動：

- 步行
- 騎單車
- 輕量健身操
- 原地踩單車
- 輕量舉重
- 游泳
- 鍛煉手臂
- 太極拳
- 六通拳
- 園藝

不建議的運動：

- 重量的舉重
- 激烈的運動
- 強度健身操



## Types of Exercises

People with diabetes, especially those with eye or foot problems, should choose the appropriate type of exercise to avoid further damage to the eyes and feet.

Exercises recommended:

- Walking
- Bicycling
- Low impact aerobics
- Stationary cycling
- Light weight training
- Swimming
- Arm exercises
- Tai Chi
- Loo Tung Chuan
- Gardening

Exercises not recommended:

- Heavy weight lifting
- Heavy competitive sports
- High impact aerobics

### C. 糖尿病藥物

如果控制飲食和運動仍然不能將血糖維持到正常的水平的話，就需要服食藥物。通常有口服藥丸，注射胰島素或兩者結合的治療方法。

#### 口服藥丸 (糖尿丸)

糖尿丸並不是胰島素，因為胰島素不可能是丸狀。若是丸狀則會經過胃部，而會被胃酸破壞。糖尿丸通過以下的方法將血糖降低：

- 刺激胰臟釋放更多胰島素
- 減低肝部產生葡萄糖
- 改善細胞對葡萄糖的吸收應用
- 緩慢澱粉質類食物及糖份的消化及吸收
- 阻止腎臟重吸收葡萄糖和增加尿液中葡萄糖的排泄服食

糖尿丸的副作用有：氣脹，腹瀉，尿道感染，和低血糖。記得詢問你的醫生或藥劑師甚麼時間服藥較為適宜，以便減少副作用，並學習如何處理低血糖 (請參閱低血糖症章節)。

#### 非胰島素注射性糖尿藥

非胰島素注射性糖尿藥通過以下的方法將血糖降低：

- 刺激胰臟胰島素分泌
- 減慢胃的排空
- 減低肝臟產生葡萄糖
- 增加飽肚感覺

### C. Diabetes Medications



When diet and exercise are not enough to lower blood glucose to the desired levels, diabetes medications may be necessary. Oral diabetes pills, insulin injections, or a combination of both are used to control blood glucose.

#### Oral Medications (diabetes pills)

Diabetes pills are not insulin. Insulin does not come in pill form, because stomach acids can easily destroy insulin.

They work to reduce blood glucose by:

- Stimulating the pancreas to release more insulin
- Reducing the amount of glucose produced by the liver
- Improving the use of glucose by the cells
- Slowing down the digestion and absorption of starches and sugar
- Blocking reabsorption of glucose by the kidneys and increasing elimination of glucose in the urine

Side effects may include gas, diarrhea, urinary tract infections, and low blood sugar. Ask your doctor or pharmacist for the best time to take your medication in order to minimize side effects and learn how to treat low blood sugar (refer to section on treatment of low blood sugar).

#### Non-insulin Injectable Diabetes Medications

They work to reduce blood glucose by:

- Stimulating insulin secretion
- Slowing stomach emptying
- Reducing production of glucose by the liver
- Increasing feeling of fullness

這藥物需要在餐前皮下注射，每天1至4次。副作用包括有：作悶、嘔吐、體重下降、低血糖（若同時採用胰島素）。

### 注射胰島素



如果你的胰臟不能再產生足夠的胰島素，又或者它在你的身體中起不到作用時，你則需要注射胰島素。根據每個人身體情況的不同需求，胰島素可一天注射一次或數次。注射部位最佳是腹部，其次是上臂或大腿。

胰島素主要的副作用是低血糖。懂得如何預防及處理低血糖是非常重要（請參閱低血糖症章節）。如果你手部，嘴唇，面部，舌頭有麻痺感，言語不清，或昏昏欲睡，應立刻與醫生聯絡。

目前有不同類型的胰島素：快效，短效，中效，長效以及混合的幾種。各種不同的胰島素合劑，是根據其在身體上停留的時間長短以及生效的快慢而用來控制血糖。何時吃東西，吃甚麼東西，以及注射胰島素的時間等對控制血糖均很重要，因為這些因素都可以幫助你身體維持正常的血糖度數以及防止低血糖的產生。緊記遵從醫生指示在何時及如何注射胰島素，以達到最佳效果。

胰島素吸入劑是一種在進餐前吸入的快效胰島素，現時已批准使用。請與你的醫生商討這選擇是否適合你。

Injections are given under the skin before meals, between 1-4 times a day. Side effects may include nausea, vomiting, weight loss and low blood sugar (when given along with insulin).

### Insulin

You will need to take insulin injections when your pancreas does not produce enough insulin to keep your blood glucose levels within a healthy range. Insulin shots are given one or more times a day depending on the person's need. The preferred injection site is the abdomen, followed by the upper arm or thigh.

The major side effect of insulin is low blood sugar. It is important to know how to prevent and treat low blood sugar (refer to section on low blood sugar). Contact your doctor immediately if you begin to experience tingling in your hands, lips, face or tongue, slurred speech, or become extremely drowsy.

There are different types of insulin: fast-acting, short-acting (regular), intermediate-acting, long-acting and premixed. Depending on how fast the insulin begins to work and how long it remains in your body, a combination of the different types of insulin is used to control blood glucose. When and what you eat as well as the timing of your insulin shots are important as they help to maintain a normal range of blood glucose and prevent low blood sugar. For best results, follow your doctor's instructions on when and how to give insulin injections.

Inhaled insulin, a fast-acting insulin that you breathe in before meals, is currently available. Ask your doctor if this option is right for you.

## D. 自我血糖測試

### 為甚麼我要測試血糖？

定時測試血糖可幫助你更好地護理你的糖尿病，並可減低糖尿病併發症。你可以在家中使用血糖測試機自我測試。

### 多久或何時測試血糖？

需要注射胰島素的一型糖尿病以及孕期糖尿病患者：

- 每天至少測試三次。

二型糖尿病患者：

- 如果服用糖尿丸，每天至少測試一次。
- 如果注射胰島素，在每次注射前測試。

測試時間：空腹，進餐之前，或進餐之後兩小時其他測試時間：

- 運動之前，運動之中或運動之後。
- 當你感覺到血糖低症狀的時候
- 當你生病時

你也可以在一天中更頻密地或在不同的時間內測試血糖，以便了解你血糖上升或下降的情況。

## D. Blood Glucose (Sugar) Monitoring

### Why should I check my blood glucose?

Checking your blood sugar regularly helps you better manage your diabetes and reduce long-term complications from the disease. You can check it yourself with a blood glucose monitor (meter).

### How often and when should I check my own blood glucose?

For type 1 diabetes and pregnant women on insulin:

- at least 3 times a day

For type 2 diabetes:

- at least once a day if on oral medications
- every time before insulin injection if on insulin

Time to test - fasting, before meal, and/or 2 hours after meal other times to test:

- before, during, and/or after exercise
- when you experience low blood sugar symptoms
- when you are sick



You may wish to check your blood glucose more often and at different times of the day to determine a pattern of your blood glucose readings.

## 血糖目標

空肚及進食之前	80-130 mg/dl
開始進餐之後兩小時	低於 180 mg/dl (最理想是 140 mg/dl 以下)
血糖紅素 (A1C) *	低於 7 %

\*血糖紅素檢驗是一種特別血液檢驗，可測量過去三個月以來一個人的平均血糖度數。這測驗是用來測量一段長時間內血糖的控制情況。

A1C (%)	估計平均血糖 (mg/dl)
6	126
7	154
8	183
9	212
10	240
11	269
12	298

## 血壓目標

正常	目標
低於 120/80 mmHg**	低於 140/90 mmHg

\*\*有些資料顯示，正常血壓應低於115/75mmHg

## 血脂肪目標

血脂肪	目標 (mg/dl)
總膽固醇 (Total Cholesterol)	低於 200
壞膽固醇 (LDL)	低於 100 ***
好膽固醇 (HDL)	高於 40 (男性) 高於 50 (女性)
甘油三酯 (Triglyceride)	低於 150

\*\*\* 對患心血管疾病有高風險的病人，其壞膽固醇之目標應低於 70mg/dl.

資料來源: 美國糖尿病協會 (2019)

## Blood Glucose Goal

Before Breakfast & Meals	80-130 mg/dl
2 Hours after the start of a meal	Less than 180 mg/dl (ideally less than 140 mg/dl)
A1C Test*	Less than 7 %

\* A1C test is a special blood test which reflects a person's average blood glucose over the past 3 months. It is a measure of long-term blood glucose control.

A1C (%)	Estimated average glucose (mg/dl)
6	126
7	154
8	183
9	212
10	240
11	269
12	298

## Blood Pressure Goal

Normal	Goal
Less than 120/80 mmHg **	Less than 140/90 mmHg

\*\* Some data suggests normal BP should be less than 115/75 mmHg

## Blood Lipid Goal

Blood Lipid	Goal (mg/dl)
Total Cholesterol	Less than 200
LDL (Bad Cholesterol)	Less than 100 ***
HDL (Good Cholesterol)	More than 40 (Men) More than 50 (Women)
Triglyceride	Less than 150

\*\*\* For people with very high-risk cardiovascular disease, LDL goal is less than 70mg/dl

Reference: American Diabetes Association (2019)



**綠色區域：控制良好**

- 血糖血紅素 (A1C) 低於 7，意味著您的平均血糖值低於 150
- 空腹血糖值介於 80-130 之間
- 進食兩小時之後的血糖值低於 180

**採取行動:**

- 請繼續遵從醫生指示服用您的藥物
- 請繼續定時測量您的血糖
- 請遵循健康的飲食習慣
- 請按時見您的醫生

**黃色區域：提醒/警示**

- 血糖血紅素 (A1C) 介於 7-9 之間，意味著您的平均血糖值處於 150-210 之間
- 空腹血糖值低於 200
- 進食兩小時之後的血糖值高於 200

**採取行動:**

- 適當地增加您的運動量
- 請與您的家庭醫生密切跟進，並和他/她討論是否有需要調整您的糖尿病治療法
- 請諮詢註冊營養師或糖尿病教育師，來幫助您更好地調理飲食和生活習慣

**紅色區域: 停下來並思考**

- 血糖血紅素 (A1C) 超過 9，意味著您的平均血糖值高於 210
- 空腹血糖值連續兩天高於 200
- 進食兩小時之後的血糖值高於 250
- 空肚或隨機血糖值同一天內連續兩次測量都高於 250



**採取行動:**  
請立刻聯繫或致電您的家庭醫生!!!

**Green Zone: Great Control**

- A1C under 7, which means average blood sugars under 150
- Fasting blood sugars between 80 to 130
- 2-hour blood sugars after meal under 180

**Green Zone Actions:**

- Continue taking your medications as prescribed
- Continue regular blood sugar monitoring
- Follow healthy eating habits
- Keep all doctor appointments

**Yellow Zone: Caution**

- A1C between 7 and 9, which means average blood sugars between 150-210
- Fasting blood sugars under 200
- 2- hour blood sugars after meal over 200

**Yellow Zone Actions:**

- Increase your activity level, as tolerated
- Follow up closely with your primary care provider to discuss any need to adjust your diabetes treatment
- Consult a registered dietitian and/or diabetes educator to work on diet and lifestyle changes

**Red Zone: Stop and Think**

- A1C greater than 9, which means average blood sugars over 210
- Fasting blood sugars over 200 two days in a row
- 2-hour blood sugars after meal over 250
- Fasting and/or random blood sugar is over 300 two times on the same day



**Red Zone Actions: CALL YOUR PRIMARY CARE PROVIDER IMMEDIATELY!!!**