

- Eat 3oz servings of deep sea fish two to three times per week for omega 3 fatty acid intake
- Have at least 150 minutes of moderate-intensity exercise per week

## Reduce Blood Pressure

Chronic high blood pressure can damage blood vessels and organs, directly increase the risk of cardiovascular diseases, kidney disease and cause retinal damage. Aging, smoking, excessive alcohol and sodium intake increase the risk of developing high blood pressure.

Control blood pressure by limiting daily sodium intake to 2,000 mg, which is around one teaspoon of salt. Apart from salt, condiments such as soy sauce, oyster sauce and chicken broth all contain sodium. Instead of using high sodium condiments, season your food with natural seasonings such as scallions, ginger, garlic, herbs and spices to reduce sodium intake while maintaining flavors. Also, try to avoid processed and preserved foods which can be very high in sodium.



**Dietary modification is an effective strategy to manage metabolic syndrome and reduce the risk of developing cardiovascular disease. Our registered dietitians will assess your dietary habits and recommend appropriate diet plans for you.**

## Department of Dietetics

### Happy Valley

Hong Kong Sanatorium & Hospital  
4/F, Central Block  
2 Village Road, Happy Valley, Hong Kong  
Tel: (852) 2835 8674 Fax: (852) 2892 7428  
dietitian@hksh-hospital.com  
www.hksh-hospital.com  
Monday to Friday: 9:00 am – 5:00 pm  
Saturday: 9:00 am – 1:00 pm  
Closed on Sundays and Public Holidays

### Admiralty

HKSH Healthcare Medical Centre  
Level 23, One Pacific Place  
88 Queensway, Hong Kong  
Tel: (852) 2855 6000 Fax: (852) 2892 7428  
dietitian@hksh-healthcare.com  
www.hksh-healthcare.com  
Consultation by Appointment

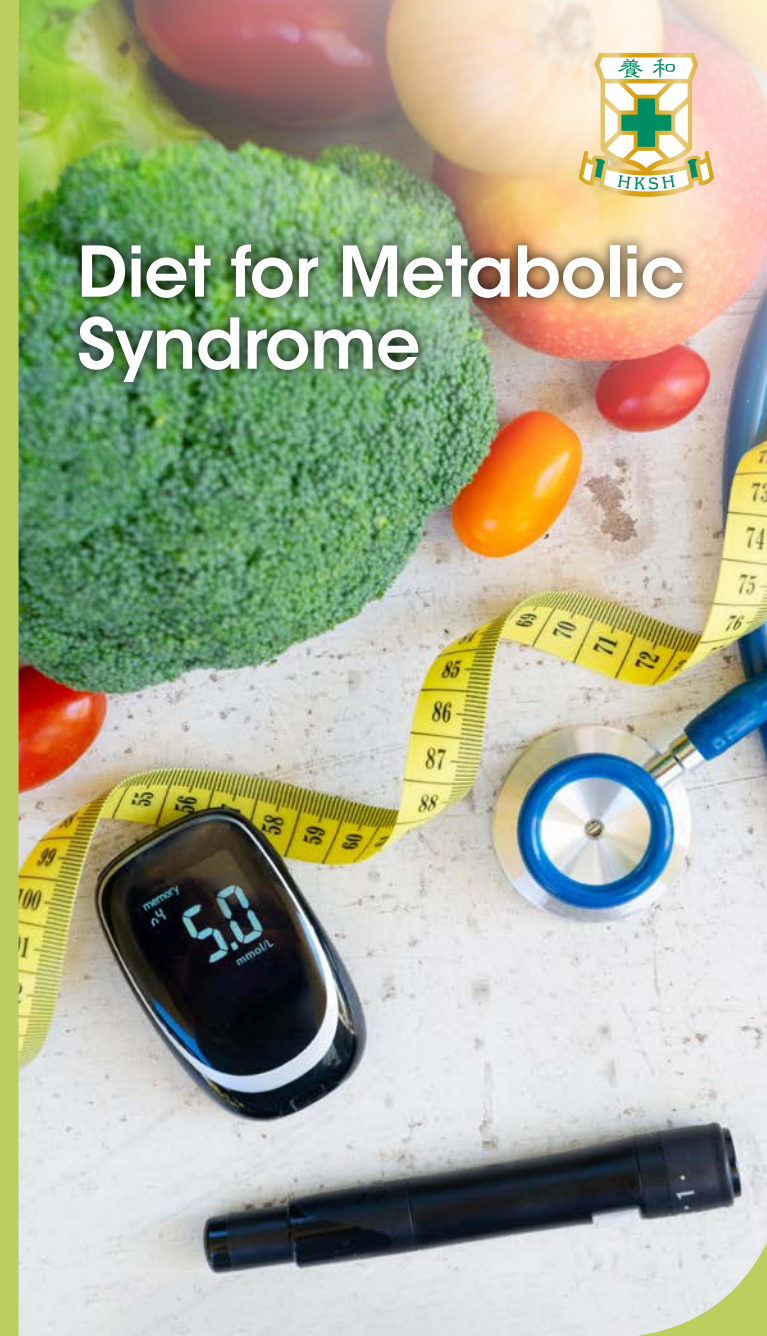
### Island East

HKSH Li Shu Fong Building  
5/F, 5 A Kung Ngam Village Road  
Shau Kei Wan, Hong Kong  
Tel: (852) 2917 1150 Fax: (852) 2892 7404  
dietitian@hksh-emc.com  
www.hksh-emc.com  
Monday to Friday: 9:00 am – 5:00 pm  
Saturday: 9:00 am – 1:00 pm  
Closed on Sundays and Public Holidays

For enquiries and appointments,  
please contact us



# Diet for Metabolic Syndrome



## What is Metabolic Syndrome?



Metabolic syndrome is a group of conditions that together raise your risk of cardiovascular diseases, diabetes and other serious health problems. The conditions include a large waistline, elevated blood sugar, reduced High-density Lipoproteins (HDL) cholesterol, elevated triglyceride and elevated blood pressure. The prevalence of metabolic syndrome increases with age. However, it is increasingly common among the younger population. If you have been diagnosed with metabolic syndrome, making healthy lifestyle changes, such as quitting smoking, reducing alcohol intake, increasing physical activity and having a healthy diet, can help prevent or delay serious health complications.

The International Diabetes Federation defines metabolic syndrome as having central obesity plus two or more of the following conditions:

<b>Central obesity</b>	Waist circumference: Male $\geq 90\text{cm}$ Female $\geq 80\text{cm}$
<b>Elevated fasting blood sugar</b>	$\geq 5.6\text{mmol/L}$ or previously diagnosed with Type II Diabetes
<b>Reduced High-density Lipoproteins (HDL) cholesterol</b>	Male $<1.03\text{mmol/L}$ Female $<1.29\text{mmol/L}$ or receiving specific treatment for low LDL cholesterol
<b>Elevated triglycerides</b>	$\geq 1.7\text{mmol/L}$ or receiving specific treatment for elevated triglycerides
<b>Elevated blood pressure</b>	Systolic $\geq 130\text{mmHg}$ Diastolic $\geq 85\text{mmHg}$ or receiving specific treatment for elevated blood pressure

## Control Blood Sugar

Sugar and carbohydrates in food are converted into blood sugar after digestion and absorption. People with elevated blood sugar should try to avoid sweets and refined carbohydrates, such as congee, white rice and white bread, since they increase blood sugar rapidly. Frequent small meals, carbohydrate control and increasing intake of high-fibre food, such as whole grains, vegetables and fruit, are recommended to maintain stable blood sugar. A registered dietitian can determine the appropriate portion of carbohydrates for you to help control your blood sugar level.

High-sugar foods include:

- White sugar, brown sugar, honey, candies, chocolates, desserts, etc.
- Cakes, ice cream, cookies, etc.
- Sugary drinks including soft drinks, fruit juices, sport drinks, bubble tea, etc.

Foods contain carbohydrates:

- Grains, such as rice, noodles, pasta, bread, oats, biscuits
- Root vegetables, such as potatoes, pumpkins, sweet potatoes, lotus roots, carrots, corn
- Dried beans and bean products, such as red / green beans, black eyed peas, rice beans, kidney beans, hyacinth beans, vermicelli
- Chinese soup ingredients such as Ching Po Leung, Chinese yam, Euryale seed, ginseng, American ginseng, lily bulbs
- Fruits, such as grapes, oranges, bananas, apples
- Dairy products, such as fresh milk, evaporated milk, milk powder, yoghurt



## Reduce LDL Cholesterol and Raise HDL Cholesterol

Cholesterol joins with lipoproteins to travel through blood. The two main types of cholesterol are LDL cholesterol and HDL cholesterol. LDL (BAD cholesterol) accumulate on the walls of arteries, restricting blood flow, while HDL (GOOD cholesterol) carry excess lipid away for excretion, reducing the risk of cardiovascular diseases.

It is a misconception that dietary cholesterol (egg yolk and seafood) significantly increases blood cholesterol. The liver actually produces about 80% of blood cholesterol while the remaining comes directly from food. Eating high cholesterol food in moderation has little effect on blood cholesterol. In fact, blood cholesterol is mainly affected by consuming food high in saturated fat and trans fat.

To reduce LDL cholesterol, limit the intake of high saturated fat food (butter, skin of poultry, fatty and processed meat) and avoid food with trans fat (fried food and pastries, etc.). In addition, substitute these foods with foods rich in monounsaturated fat, such as avocado, nuts and olive oil to reduce LDL cholesterol and raise HDL cholesterol.

Also, increase intake of foods which can lower bad cholesterol, including food high in soluble fibre (fruit, vegetables, oats, legumes, mushrooms, etc.), deep sea fish, nuts and plant stanol.

## Reduce Triglycerides

Triglycerides are a type of fat that circulates in the blood. Elevated triglycerides thicken the blood and increase the risk of cardiovascular diseases. To effectively control blood triglycerides, the following lifestyle modifications are recommended:

- Avoid excessive alcohol intake. Limit to two units of alcohol per day for male, and one unit for female. One unit of alcohol equals 330ml of beer, 150ml of red wine or 30ml of spirits
- Limit high-sugar foods and refined carbohydrates
- Limit foods high in saturated fat and trans fat



## 降血壓

血壓長期過高會損壞血管及器官，直接增加患上心血管疾病、腎衰竭或視網膜疾病的風險。年齡增長、吸煙和過量飲酒都會增加患上高血壓的風險。以飲食而言，過量攝取鈉質是令血壓升高的主要成因。

建議每日攝取少於2,000毫克鈉質，即相等於一茶匙鹽。除鹽外，豉油、蠔油和雞湯等調味料均含鈉質，故鹹味調味料應少用。宜改用天然調味料如蔥、薑、蒜和香草等，能減少鈉質吸收，同時增添食物的味道。此外，加工及醃製食品都屬於高鈉食物，應避免進食。



改善飲食習慣有助控制「四高」，減低患上心腦血管疾病的風險。註冊營養師可幫助評估你的日常飲食習慣，為你釐定一個合適的餐單及計劃。

## 營養部

### 跑馬地

養和醫院

香港跑馬地山村道2號中院4樓

電話：(852) 2835 8674

傳真：(852) 2892 7428

dietitian@hksh-hospital.com

www.hksh-hospital.com

星期一至星期五：上午九時至下午五時

星期六：上午九時至下午一時

星期日及公眾假期休息

### 金鐘

養和醫健專科中心

香港金鐘道88號太古廣場一座23樓

電話：(852) 2855 6000

傳真：(852) 2892 7428

dietitian@hksh-healthcare.com

www.hksh-healthcare.com

敬請預約

### 港島東

養和李樹芳樓

香港筲箕灣阿公岩村道5號5樓

電話：(852) 2917 1150

傳真：(852) 2892 7404

dietitian@hksh-emc.com

www.hksh-emc.com

星期一至星期五：上午九時至下午五時

星期六：上午九時至下午一時

星期日及公眾假期休息

查詢或預約，歡迎聯絡我們



# 健康飲食防四高



## 「四高」是什麼？



「四高」一詞源自「代謝綜合症」，一般是指同時患有與代謝有關的致病因素，包括中央肥胖、高血糖、高密度脂蛋白膽固醇(HDL)偏低、三酸甘油酯偏高及高血壓。其發病率會隨年齡上升，年齡愈大患「代謝綜合症」的風險愈高。「代謝綜合症」患者出現心腦血管疾病及糖尿病的風險會明顯增加，而近年亦有年輕化趨勢。除藥物控制外，患者可以從生活習慣著手，例如健康飲食、減少飲酒、恆常運動及戒煙等，從而改善以上問題。

根據國際糖尿病聯盟指出，如有中央肥胖及以下兩個或以上的風險因素，則屬患上「代謝綜合症」：

中央肥胖	男性腰圍 $\geq 90$ 厘米 女性腰圍 $\geq 80$ 厘米
空腹血糖指數偏高	$\geq 5.6\text{mmol/L}$ 或曾診斷患上二型糖尿病
高密度脂蛋白膽固醇(HDL)偏低	男性： $< 1.03\text{mmol/L}$ 女性： $< 1.29\text{mmol/L}$ 或需服用降膽固醇藥物
三酸甘油酯偏高	$\geq 1.7\text{mmol/L}$ 或需服用降血脂藥物
血壓偏高	上壓： $\geq 130\text{mmHg}$ 下壓： $\geq 85\text{mmHg}$ 或需服用降血壓藥

## 控制血糖

食物中的糖分及碳水化合物經消化及吸收後，便會轉化成血糖。甜食及精製碳水化合物如白粥、白飯、白麵包等，會令血糖急劇上升，故少吃為佳。建議高血糖人士「少食多餐」，並控制每餐的碳水化合物量，以及多吃高纖維食物如全穀類、蔬菜和水果等，以保持血糖平穩。

減少進食高糖食物：

- 白糖、黃糖、片糖、蜜糖、糖果、朱古力、甜品等
- 西餅、雪糕、曲奇等
- 高糖分飲品如汽水、果汁、運動飲品、台式飲品等

適量進食高碳水化合物的食物：

- 五穀類如飯、麵、意粉、麵包、燕麥、餅乾等
- 根莖類蔬菜如薯仔、南瓜、蕃薯、蓮藕、甘筍、粟米等
- 乾豆類及其製品如紅豆、綠豆、眉豆、赤小豆、腰豆、扁豆、粉絲等
- 中式湯料如清補涼、淮山、芡實、人蔘、花旗蔘、百合等
- 水果類如提子、橙、香蕉、蘋果等
- 奶類如鮮奶、淡奶、奶粉、乳酪等



## 提升好膽固醇 降低壞膽固醇

膽固醇與脂蛋白在血液中流動，主要分為低密度脂蛋白膽固醇(LDL-cholesterol, 俗稱「壞膽固醇」)及高密度脂蛋白膽固醇(HDL-cholesterol, 俗稱「好膽固醇」)。壞膽固醇會在血管內壁上積聚，阻礙血液流動；相反，好膽固醇有助減少血管上積聚的脂肪，降低患上冠心病的風險。

不少病人擔心進食蛋黃及海鮮等高膽固醇食物會令體內膽固醇增加，惟血液中的膽固醇八成由肝臟製造，餘下兩成來自飲食，所以適量進食高膽固醇食物，對血液膽固醇影響不大。事實上，對血液膽固醇影響最大的是飲食中的飽和及反式脂肪。

若要改善膽固醇水平，應少吃高飽和脂肪的食物如牛油、雞皮、肥肉及加工肉類等，以及油炸食物和酥皮烘焙製品等高反式脂肪食物。取而代之的是從飲食中攝取足夠單元不飽和脂肪酸，包括牛油果、果仁及橄欖油等，既可降低壞膽固醇水平，亦可提高好膽固醇水平。

而有助降低壞膽固醇的食物包括含豐富水溶性纖維的水果、蔬菜、燕麥、乾豆、菇菌類食物、深海魚、堅果、植物固醇等。

## 降低血內三酸甘油脂

三酸甘油脂是血液中的油脂，過高會導致血液變得濃稠，增加患上心腦血管疾病的風險。要有效控制體內的三酸甘油脂，應注意以下飲食建議：

- 避免攝取過量酒精：男士每日不應飲用多於兩份酒精單位，而女士不應飲用多於一份酒精單位。一份酒精單位約等於330毫升啤酒、150毫升紅酒或30毫升烈酒
- 減少進食高糖食物及精製碳水化合物
- 減少進食含大量飽和脂肪及反式脂肪的食物
- 每週進食兩至三份約3安士的深海魚以補充奧米加3脂肪酸
- 每週進行最少150分鐘的中強度運動