

# Sweet Heart Is It Really Sweet?



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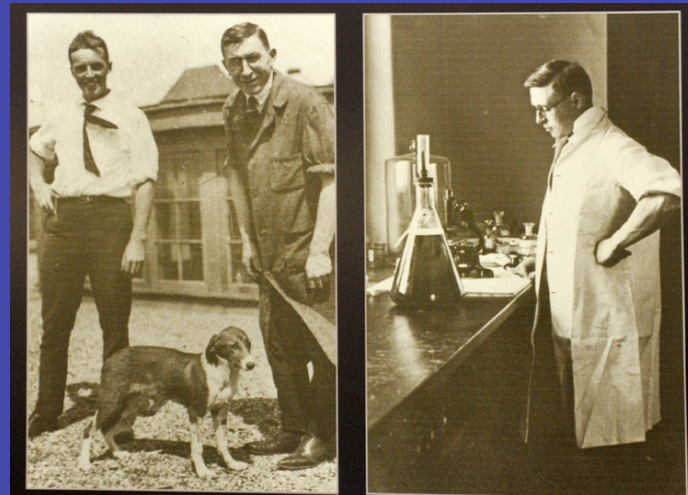
## 你我用心, 掌握健康人生

THIS IS WHAT HAPPENS WHEN YOU PUT YOUR HEART INTO IT.



## 糖尿病是什麼？

一個小螞蟻的故事



1922



1923

5

## Banting and Best Institute



## 糖尿病是什麼？

故名思義

就是尿的糖份過高

但這就是代表

**血糖極高!!!**

## 怎樣才算有糖尿病？

晨早(早餐前) 血糖  $\geq 7.0$  度

任何時間 血糖  $\geq 11.1$  度

A1C  **$A1C \geq 6.5\%$**

IGT  **$A1C 6.0-6.4\%$**

# 糖尿病有多種？

## 第一類

- 小孩或少年開始
- 原因是胰臟受損 -- 沒法製造胰島素 (insulin deficiency)
- 完全依靠注射胰島素才可生存

## 第二類

- 由中年至成年開始
- 原因是胰島素功能不全 (insulin resistance)
- 多時會有其它病同時發生
  - 肥胖症
  - 高血壓
  - 膽固醇和三油脂過高

# 為什麼糖尿病那麼可怕？

- 因為它是長久性及加上病情漸進
- 它不可根治, 止可以控制
- 可以引起很多種嚴重的並發症

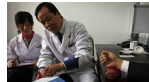
## Diabetes in Chinese-Canadians increases rapidly

Diabetes incidence rose 15-fold between 1996-2005 among Canadians of Chinese origin

CBC News  
Posted: May 30, 2013 10:13 AM ET  
Last Updated: May 30, 2013 4:57 PM ET

Chinese-Canadians are at a much higher risk of a diabetes diagnosis despite having lower rates of obesity compared with European Canadians, a new study suggests.

The incidence of [diabetes](#) increased 15-fold between 1996 and 2005 among Canadians of Chinese origin, but rose only 24 per cent in people with a European background, according to Thursday's study by researchers at Toronto's Institute for Clinical Evaluative Sciences.



A patient with diabetes rests his arm on a table for specialist Dr. Tong Xiao Lin during a checkup in Beijing last year. Diabetes rates are increasing among people of Chinese origin in Canada and in China itself. (David Gray/Reuters)

"People are increasingly across all subgroups of the population doing less physical activity, being more sedentary, sitting in front of a screen all day, changing their diet," said Bajun Shah, the study's lead author and scientist at ICES.

"That's going to change weight and therefore the risk of diabetes."

Shah's team saw the increase in diabetes rates even after accounting for differences in age, weight and socioeconomic status for the Chinese population.

Migration of Chinese populations from densely populated urban areas to suburban populations where people tend to drive more may also be associated with greater diabetes risk, the researchers speculated.

"Diabetes incidence increased much more rapidly between 1996 and 2005 in the Chinese population than in the European population, independent of age, obesity and other risk factors," the study's authors conclude in the journal *Diabetes Care*.

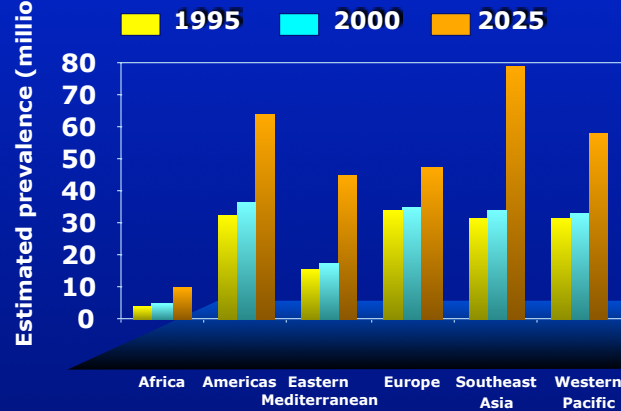
### Specific obesity, diabetes prevention plans urged

People of Chinese origin now join individuals from other non-European ethnic groups as being identified at

# Diabetic Epidemic

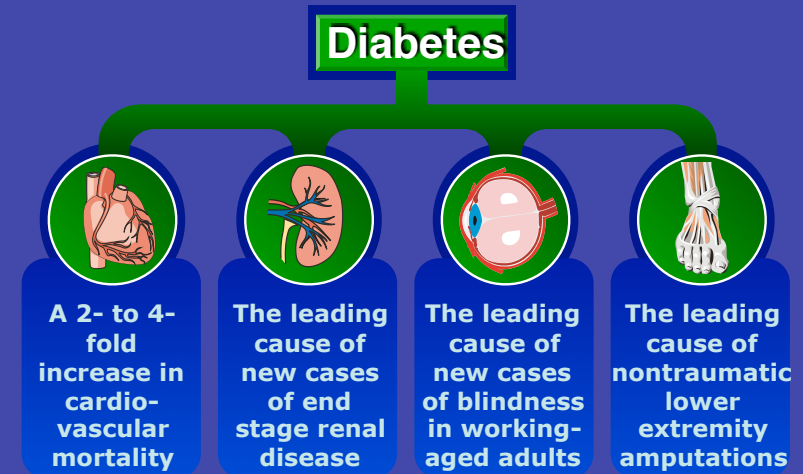
- 5% Canadians Diabetic
- 2.5-5% undiagnosed
- 2.2 million diabetics in Canada
- 60,000 new cases / year
- More prevalent in older population
- Increase in next 10 years to > 3 million
  - Baby boomers
    - 50% obese
    - 75% no physical activity

## Estimates of Diabetes Prevalence in World Regions



WHO Report 1997. World Health Organization. Geneva;1997.

## Clinical Impact of Diabetes Mellitus



## 糖尿病的長期並發症

因血糖長期失控掣所引起：

**眼睛** – 糖尿病眼病是引至失明的最大原因



**腎臟** – 糖尿腎病是引至腎臟失靈而需要洗腎的最大原因



**神經** – 神經基能失靈

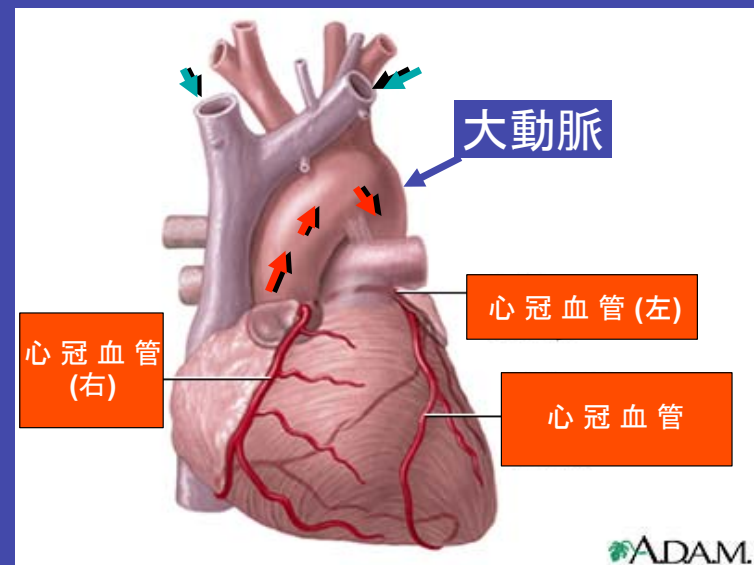
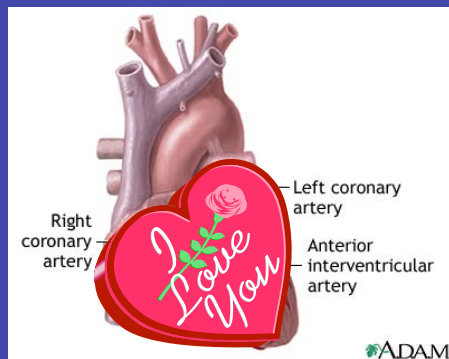
糖尿患者中導至死亡之

最大成因是

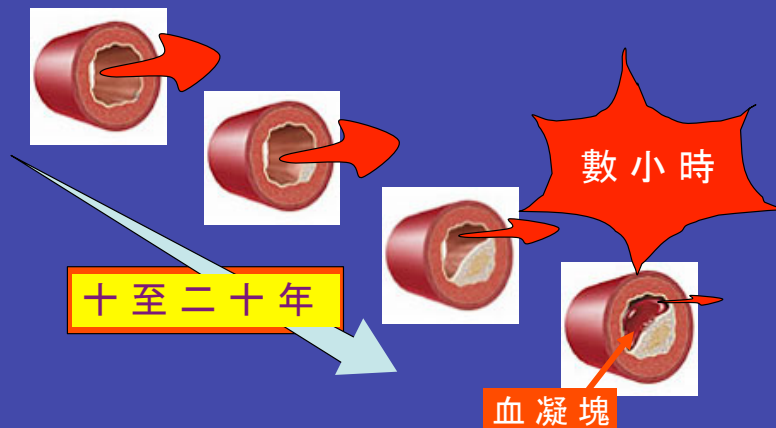
# 心病!!



# 冠心病是什麼？



## Atherosclerosis progression 心冠動脈粥樣硬化的過程



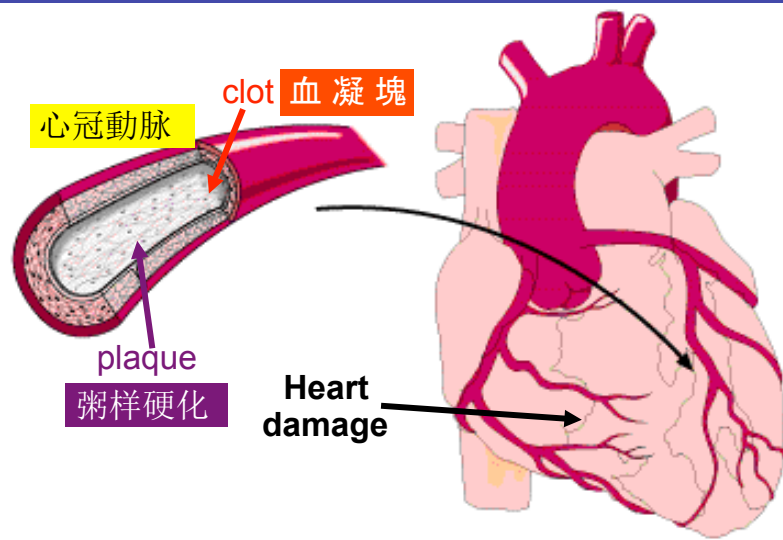
Transition to Acute Coronary Syndrome

# 冠心病的成因

## 風險因素 Risk Factors :

- 糖尿病
- 高血壓
- 膽固醇和三油脂過高
- 吸煙
- 肥胖症

Diabetes  
Hypertension  
Dyslipidemia  
Cigarette smoking  
Obesity

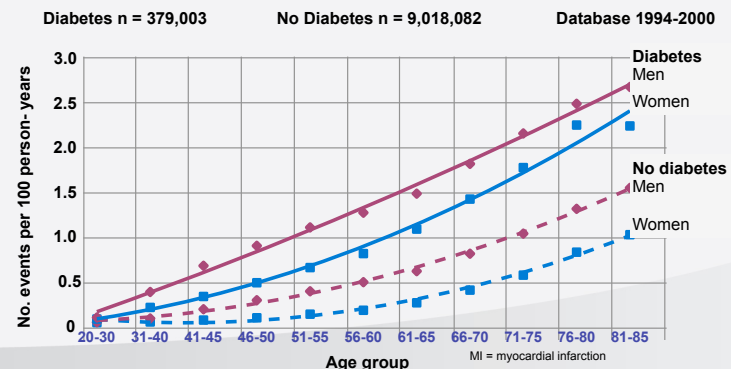


## Vascular Protection Checklist

2013

- ✓ **A** • A1C – optimal glycemic control (usually  $\leq 7\%$ )
- ✓ **B** • BP – optimal blood pressure control ( $< 130/80$ )
- ✓ **C** • Cholesterol – LDL  $\leq 2.0$  mmol/L if decided to treat
- ✓ **D** • Drugs to protect the heart  
A – ACEi or ARB | S – Statin | A – ASA if indicated
- ✓ **E** • Exercise – regular physical activity, healthy diet, achieve and maintain healthy body weight
- ✓ **S** • Smoking cessation

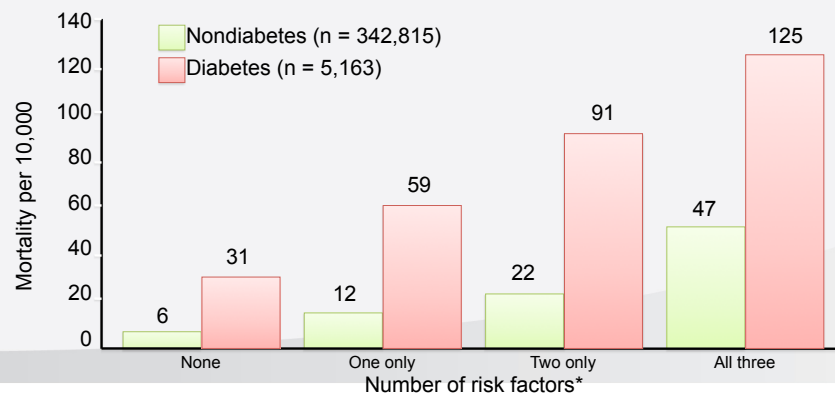
## Absolute Risk of MI is Higher in Patients with DM



All lines fitted according to a polynomial equation;  $R^2 = 0.99-1.00$  for each

Booth GL, et al. *Lancet* 2006;368:29-36.

## MRFIT: Impact of Diabetes on Cardiovascular Mortality

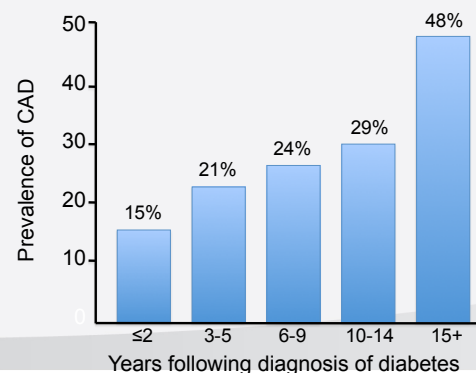


\*Risk factors analyzed: smoking, hypercholesterolemia and hypertension.

Stamler J, et al. *Diabetes Care* 1993; 16(2):434-44



## Prevalence of Coronary Artery Disease (CAD) and Duration of Known Diabetes



• Risk for CAD likely begins before the diagnosis of diabetes

• Patients with known diabetes >15 years: high risk of CAD events

Cho E, et al. *J Am Coll Cardiol* 2002; 40(5):954-60

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## Multifaceted Management is Essential for T2DM

- Intensive multifaceted management in patients with Type 2 diabetes lowers overall mortality
- **Multifaceted treatment strategy** includes:
  - Glucose, lipid, BP control
  - Health behavior optimization
  - Use of vascular protective medications

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## Use a Multifaceted Vascular Protection Strategy



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## 我太肥嗎？

你的體肥指數是什麼？

BMI (Body Mass Index)

你的腰圍是多少？

WC (Waist Circumference)

## 體肥指數是什麼？

$$\text{BMI} = \frac{\text{體重 (kg)}}{\text{體高 (m)} * \text{體高 (m)}}$$

BMI < 25                  正 常

BMI 25 – 30              過 重

BMI > 30                  肥 胖 症



身為中國人，  
我不可能這麼肥  
應該擔心嗎？

肥胖症是當 BMI > 27  
不是                  > 30



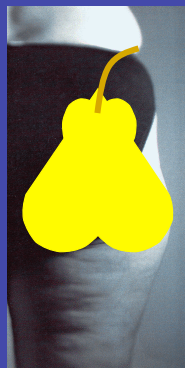
她是  
過重  
還是有  
肥胖症？

## 肥胖症的類形

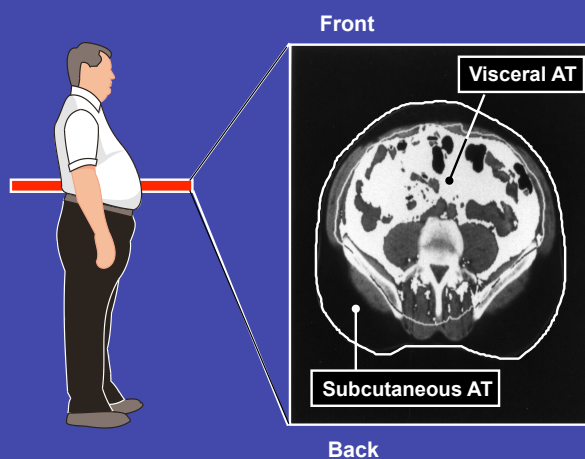
蘋果形



梨子形



## 腹內肥 -- 特別危險



AT: adipose tissue

## 你的腰圍正常嗎？

白人

男仕腰圍 < 37 英吋 (94 cm)

女仕腰圍 < 31.5 英吋 (80 cm)

華人

男仕腰圍 < 35.4 英吋 (90 cm)

女仕腰圍 < 31.5 英吋 (80 cm)

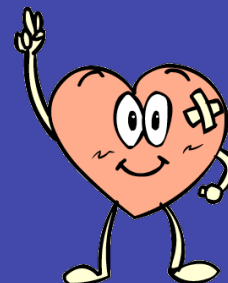


## 你的腰圍正常嗎？

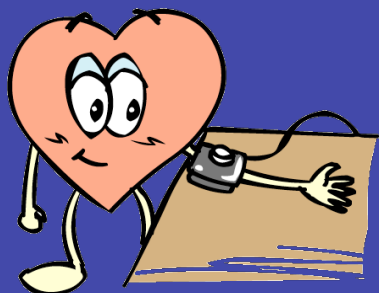
男仕腰圍 < 40 英吋 (101 cm)

女仕腰圍 < 35 英吋 (90 cm)

## 我有糖尿病 應該怎樣做去預防 心冠病呢？



## 積極控制血壓



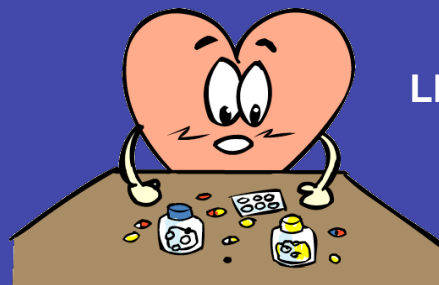
診所或醫院

SBP < 130 mmHg  
DBP < 80 mmHg

家庭

SBP < 125 mmHg  
DBP < 75 mmHg

## 積極控制血脂



低密度膽固醇

LDL Cholesterol < 2.0

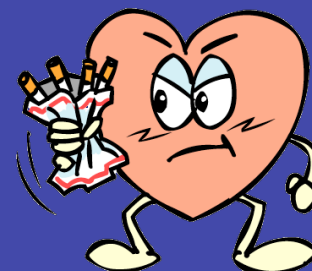
Total Chol / HDL < 4

[Link to CMR Tool](#)

## 積極控制血糖



## 停止吸煙



### Vascular protective medications

- Statins
- ACE-inhibitors or Angiotensin receptor blockers (ARB)
- ASA selective use

### Who Should Receive Statins?

2013

- $\geq 40$  yrs old *or*
- Macrovascular disease *or*
- Microvascular disease *or*
- DM  $> 15$  yrs duration and age  $> 30$  years *or*
- Warrants therapy based on the 2012 Canadian Cardiovascular Society lipid guidelines

Among women with childbearing potential, statins should only be used in the presence of proper preconception counseling & reliable contraception. Stop statins prior to conception.

2013

## Who Should Receive ACEi or ARB Therapy?

- $\geq 55$  years of age *or*
- Macrovascular disease *or*
- Microvascular disease

At doses that have shown vascular protection (ramipril 10 mg daily, perindopril 8 mg daily, telmisartan 80 mg daily)

Among women with childbearing potential, ACEi or ARB should only be used in the presence of proper preconception counseling & reliable contraception. Stop ACEi or ARB either prior to conception or immediately upon detection of pregnancy

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## ASA Not Routinely Recommended for 1<sup>o</sup> Prevention for CVD Among Patients with DM

**Insufficient evidence to support use of ASA for primary prevention**

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Risk of bleeding

CVD protection



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### Does This Patient Require Vascular Protective Medications?

#### STEP 1: Does the patient have end organ damage?

- ☐ Macrovascular disease
- Cardiac ischemia (silent or overt)
  - Peripheral arterial disease
  - Cerebrovascular/Carotid disease

YES

OR

- ☐ Microvascular disease
- Retinopathy
  - Nephropathy (ACR  $\geq 2.0$ )
  - Neuropathy

YES

NO

#### STEP 2: What is the patient's age?

- ☐  $\geq 55$  years

YES

OR

- ☐ 40-54 years

YES

NO

#### STEP 3: Does the patient...

- ☐ Have diabetes > 15 years AND age > 30 years
- ☐ Warrant statin therapy based on the 2012 Canadian Cardiovascular Society Lipid Guidelines

YES

STATIN\*  
+  
ACEi or ARB#  
+  
ASA  
Clopidogrel if ASA-intolerant

STATIN\*  
+  
ACEi or ARB#

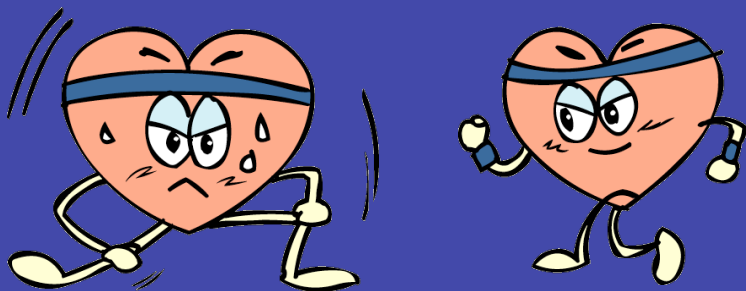
STATIN\*

糖尿病可以預防的嗎?

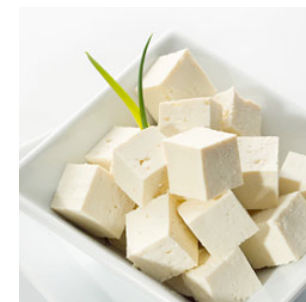
臨床實驗証明, 對糖尿高風險的人,

## 經常運動及健康飲食

患糖尿的機會率可減低一半!



安省心臟及中風基金會華人分會  
心血管及中風知識講座2009



HEART & STROKE  
FOUNDATION  
OF ONTARIO  
Finding answers. For life.

安省心臟及中風基金會華人分會  
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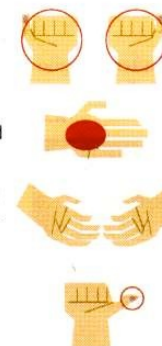


HEART & STROKE  
FOUNDATION  
OF ONTARIO  
Finding answers. For life.

### How much should you eat?

Your hands can be very useful in estimating appropriate portions. They're always with you, and they're always the same size! When planning a meal, the Canadian Diabetes Association suggests using these portion sizes as a guide:

- **Grains, starches and fruits:** Choose an amount up to the size of your fist.
- **Meats and alternatives:** Choose an amount the size of the palm of your hand and the thickness of your little finger.
- **Vegetables:** Choose as much as you can hold in both hands. Choose low-carbohydrate vegetables (e.g. green or yellow beans, broccoli, lettuce).
- **Fat:** Limit fat to an amount the size of the tip of your thumb.
- **Milk and alternatives:** Drink up to 250 ml (8 oz.) of low-fat milk with a meal.



Adapted from the Canadian Diabetes Association's *Just the Basics: Tips for Healthy Eating, Diabetes Prevention and Management Guide*, August 2005



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Look for these words:

LOW-SODIUM  
sodium-free  
no salt added  
sodium-reduced  
UNSALTED

**Nutrition Facts**  
Serving Size 1 cup (240g)  
Amount Per Serving  
Calories 41    Calories from Fat 0  
% Daily Value\*  
Total Fat 0 g    0%  
Saturated Fat 0 g    0%  
Trans Fat 0 g  
Cholesterol 0 mg    0%  
Sodium 24 mg    1%  
Total Carbohydrate 10 g    3%  
Dietary Fiber 2 g    10%  
Sugars 6 g

ADAM.

Sodium  
Na  
鈉

< 2300 mg  
< 1500 mg

54



一茶匙 =  
900 mg

55

www.sodium101.ca

鈉資料全攻略  
掌握實況! 或 有備而戰!

HOME 新聞更新 每日鹽分攝取 飲食控制 學習內幕 食譜 聯絡我們

(English) Canadian fast food saltier than similar products in Australia, France, UK and New Zealand  
对不起，此内容只适用于Francais和English。

(English) Ottawa and Queen's Park Consider Mandating Nutrition Info on Menus of Chain-Restaurant Menus  
对不起，此内容只适用于English。

(English) Canadian fast food saltier than similar products in Australia, France, UK and New Zealand  
对不起，此内容只适用于Francais和English。

English  
Francais  
中文

GO

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(English) A Consumer's Guide



安省心臟及中風基金會華人分會  
心血管及中風知識講座2009



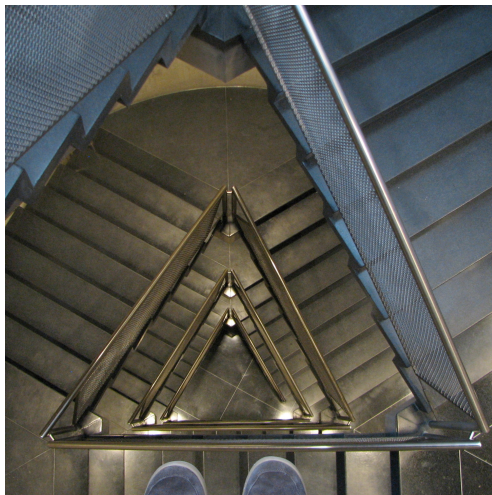
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Free Gym !



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Free Gym !



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## Ride For Heart Sunday, 2 June 2013



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心血管及中風知識講座2009

# 恆



[www.heartandstroke.ca/chinese](http://www.heartandstroke.ca/chinese)

## Vascular Protection Checklist

2013

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