

# Weighing down on diabetes

■ By Prof Mohd Ismail Noor

HUSBAND and wife Nik and Linda suffer from Type 2 diabetes. Linda inherited Type 2 diabetes from her parents while Nik became diabetic because of obesity.

If you are like Nik, your path to weight reduction begins by understanding how one becomes fat.

Overeating, especially food high in fats and sugars, coupled with the lack of physical activity, leads to energy imbalance. There is a surplus of energy that is not used through daily activities.

This excess energy is stored as body fat and over a period of time one could eventually be classified as obese. The risk of developing diabetes increases simply by being obese.

## Weighty indications

IT is advisable to check whether you are obese by calculating your Body Mass Index (BMI). Divide your weight in kilograms by the square of your height in metres (kg/m<sup>2</sup>). Your BMI reflects your body weight status.

Compare your BMI against the Personal Weight & Health Risk Reference Table below. The higher your BMI, the greater your likelihood of getting diabetes or other obesity-related diseases.

(This classification is not suitable if you are a body builder or a professional athlete as your muscle mass is high.)

Dividing your waist circumference by your hip circumference is an alternative method to determine your risk of diseases.

A waist:hip ratio (WHR) exceeding 1.0 (for men) or more than 0.85 (for women) is a danger sign. You can double check by referring to your waist circumference — if it exceeds 90cm (men) or 80cm (women), you're in trouble.

A WHR or waist circumference

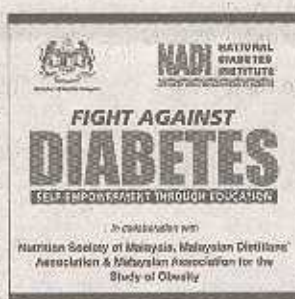
exceeding the limits indicates abdominal obesity that can have the effect of causing insulin resistance (that is insensitivity to the action of insulin whose function is to enable glucose to enter the body's cells).

When this occurs, cells begin to starve even as glucose accumulates in the blood (hyperglycaemia) and your pancreas starts over-producing insulin (hyperinsulinaemia) to try to induce glucose into your hungry cells.

This compensatory measure may work for a while. But your insulin resistance is likely to get worse while the insulin-producing capacity of your overworked pancreas may start to diminish. At some point, your body will not be able to cope anymore and your blood glucose level will rise uncontrollably. That's when you have diabetes.

## Reduce your weight

If you are obese and not diabetic, but have higher-than-normal levels of blood glucose,



high blood cholesterol or high blood pressure, it's vital that you lose weight. By reducing your body weight, you may be able to prevent diabetes from setting in.

This is supported by the Diabetes Prevention Programme Research Group in the United States which conducted a study involving 3,234 non-diabetic, overweight persons

with elevated blood glucose.

The study revealed that reducing and controlling body weight through lifestyle changes was, by far, more effective in preventing the development of diabetes than just treating high blood glucose with medication. If you are obese and have diabetes, weight loss of 5-10 per cent is a clinically important goal.

A 10 per cent weight loss could increase your life expectancy by preventing death from all diabetes-related causes (including heart attack and stroke).

With the fall in weight comes the improvement in your blood glucose levels, insulin sensitivity, HbA1c and lipid (blood fat) profile.

You can check on your progress by monitoring your blood glucose and blood pressure at home, and visiting your doctor regularly.

Clearly, much good will come from achieving and maintaining healthy body weight. So, make an effort to change your lifestyle by engaging in regular physical activity, like taking a brisk, 30-minute walk every day.

Also, start eating healthily. Stop snacking unnecessarily and eat smaller, regular meals.

You may need to start counting calories. Cut down on your fat and sugar intake and eat more complex carbohydrate foods.

Rice alone won't make you fat but overeating definitely will. If you crave the sweet taste, reach for a low calorie sweetener.

Having said all this, obesity is a medical problem that can be harder to manage when other diseases are also present.


So, be smart and ask your doctor for appropriate weight-reducing strategies (that will include diet

control, increased physical activity and probably anti-obesity medication) to manage your diabetes, high blood cholesterol or hypertension.

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## PERSONAL WEIGHT & HEALTH RISK REFERENCE TABLE

If your BMI (kg/m <sup>2</sup> ) is ...	You are classified as being ...	Your risk of co-morbidities (including diabetes, heart attack, stroke, etc) is ...	
Below 18.5	Underweight	Low (but your risk of other clinical problems is increased)	
18.5 to 24.9	Normal range	Average Normal	
25 or more	Overweight		
• 25-29.9	Pre-obese		Increased
• 30-34.9	Obese I		Moderate
• 35-39.9	Obese II		severe
• 40 or more	Obese III	Very severe	

Source: WHO 1998