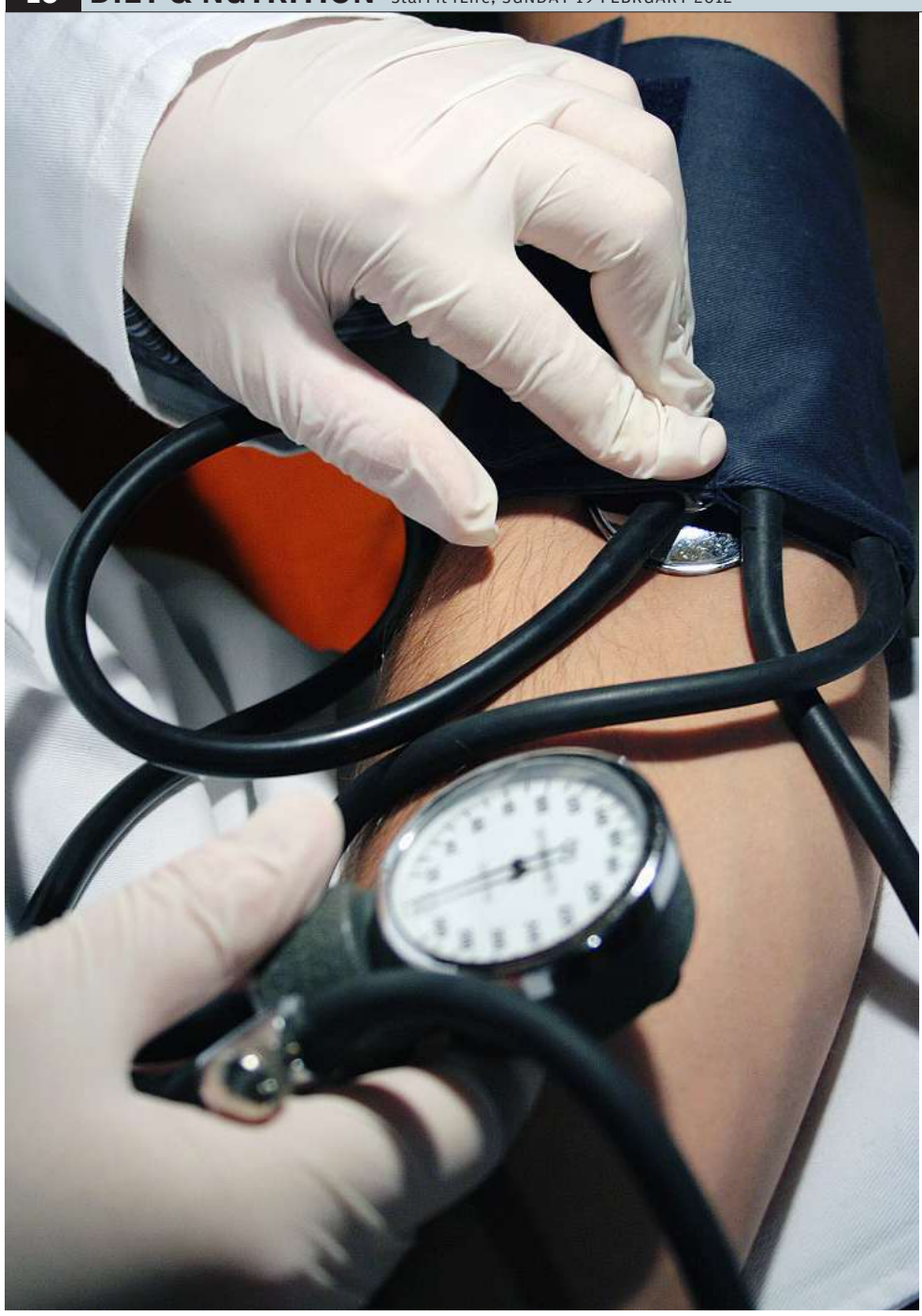


Too much salt in the diet can lead to high blood pressure and its related co-morbidities.

# Less salt please

Reducing salt intake will lead to a decrease in blood pressure and reduce the risk of cardiovascular diseases.

**By Dr TEE E SIONG**

SALT, or sodium chloride, is the main source of sodium in our diet. Sodium is an essential mineral that is required in minute amounts daily. However, excessive intake can increase risk of various adverse health effects.

Excessive dietary salt has been associated with high blood pressure and its related co-morbidities. Therefore, health authorities have recommended reducing salt intake so as to reduce health risks.

In this write up, I will highlight the ninth key message of the Malaysian Dietary Guidelines (MDG) 2010, which focuses on reducing excessive salt intake.

The MDG 2010 is a set of advisory statements aimed at promoting appropriate dietary patterns and active living. I have summarised the 14 key messages contained in the MDG 2010 and dealt in detail eight of the key messages in previous write-ups.

## Understanding salt and sodium

Salt, also known as common salt or table salt, is normally obtained from sea water or rock deposits. It is an inorganic compound consisting mainly of sodium and chloride ions, i.e. NaCl.

Both the sodium and chloride ions are needed by man in small amounts. The sodium component of salt is the element of concern in this key message of the dietary guideline.

Sodium (with the chemical symbol Na), is an essential mineral that is required daily in a minute amount. However, excessive intake is known to increase risk of adverse effects.

Salt is the major source of sodium in the Malaysian diet. One teaspoon or 5g of salt provides 2,000mg of sodium. It is, however, important to bear in mind that in addition to salt, sodium may also be present in food in other forms, such as monosodium glutamate (MSG), sodium nitrate and sodium benzoate.

## Scientific basis for the recommendations

Two main types of scientific evidence have been used as the basis of the recommendations in MDG 2010. The first is data demonstrating that excessive intake of salt (sodium) is positively related to hypertension or high blood pressure.

Hypertension is a symptom, not a disease, but it is a strong risk factor for cardiovascular and kidney diseases. For over 15 years, the evidence of an association between dietary salt intake and blood pressure has been accumulating. Many epidemiological studies have demonstrated that high salt intake is associated with an increased risk of high blood pressure and its associated health conditions.

In Malaysia, the prevalence of high blood pressure has increased in the past decade. Results from the Second National Health and Morbidity Survey (NHMS) in 1996, indicated 33% of adults aged 30 years and above had hypertension. Ten years later, the figure has increased to even higher, at 43%, as reported by the Third NHMS in 2006. It is a major risk factor for cardiovascular disease and premature death. Heart diseases, diseases of the pulmonary circulation and cerebrovascular diseases contribute up to 25% of the cause of deaths in Health Ministry hospitals.

Excess sodium intake has also been associated with a number of health conditions other than raised blood pressure. It also increases the risk of stomach cancer; it increases the rate of deterioration in kidney function of patients with renal disease; it is associated with urinary stones; and it may aggravate asthma and osteoporosis.

The second type of evidence is data revealing that lowering the average salt intake of populations can decrease the problem of hypertension. It has been generally accepted that reducing the average population salt intake would proportionately lower population average blood pressure levels and reduce risk of cardiovascular diseases.

The greatest reduction in blood pressure has been observed when a diet rich in fruits, vegetables and low-fat dairy foods is combined with a low-salt diet. This reduction in blood pressure has been shown to result in a significant reduction in strokes and coronary heart disease.

## Malaysians take too much salt

Data in the country show that the intake of salt and sodium amongst certain communities has exceeded the recommended amount. The Malaysian Adult Nutrition Survey reported that the mean sodium intake of Malaysian adults was about 2,575mg a day, with small differences between rural and urban population.

Not surprisingly, the Orang Asli were found to have the lowest daily intake of sodium of less than 1,000mg, whilst the Chinese had the highest mean intake of almost 3,000mg.

As will be discussed below, the recommendation is to limit sodium intake to 2,000mg

## MDG Key Message 9:
## Choose and prepare foods with less salt and sauces

MDG 2010 has provided two key recommendations for this key message. Within each of the following key recommendations, the MDG has provided several tips on how to achieve these recommendations.

**1. Limit salt intake to one teaspoon (5g) a day**

- Reduce the amount of salt in cooking and the addition of other flavour enhancers such as monosodium glutamate (MSG), sauces (such as soya sauce, oyster sauce, tomato sauce) and flavouring cubes.
- Enhance the flavour of food using natural herbs and condiments such as garlic, onion, curry spices, white pepper, lemon grass, vinegar and lemon.
- Limit fast food consumption and request for low-salt dishes or no MSG-added meals when eating out.
- Learn to enjoy the natural flavour of foods without salt.
- Parents should introduce low-salt food to their children from childhood.
- Salt substitutes containing potassium chloride can be one way of reducing sodium intake. However, these substitutes may be harmful to individuals with certain medical conditions such as kidney and heart problems. These individuals should consult a medical doctor before trying such salt substitutes.
- Iodised salt is utilised in the Iodine Deficiency Disorder (IDD) programme in specific areas and for high-risk groups. However, the consumption of iodised salt should not be more than one teaspoon (5g) daily.

**2. Reduce consumption of highly salted foods and condiments**

- Reduce intake of salty foods such as salted fish, salted eggs, salted vegetables, high-sodium snacks (such as potato crisps and fish & chips) and processed foods (such as sausages, chicken nuggets, meatballs and burgers).
- Choose foods with low sodium content instead of foods with medium and high sodium content within the same food group.
- Choose fresh fruits and vegetables instead of preserved and processed foods.
- Soak preserved foods such as dried anchovies and prawns in water to reduce sodium content.
- Note the sodium content of a food in the Nutrition Information Panel, compare with other available brands of the same product, and choose the one with the lower sodium content. Choose brands with "low" or "lower" claims on the label, if available.
- Read the ingredient list on the food label and take note of all sources of sodium, such as monosodium glutamate and sodium nitrate.

**Additional recommendations: Infants and children**

Breastfeed babies exclusively at least up to six months. After a child reaches six months of age, mothers can feed the baby with home-made complementary foods with no added salt. If mother chooses to feed baby with commercially prepared complementary foods, read labels for sodium content when purchasing.

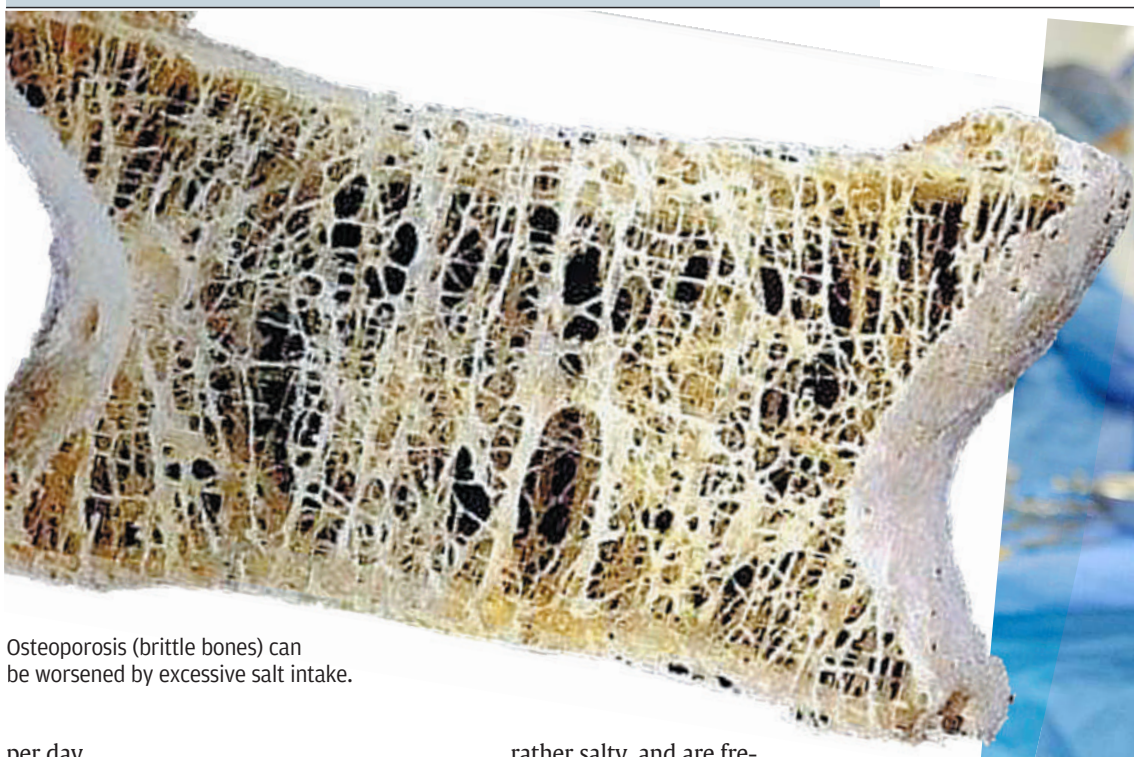
Children should limit the intake of high sodium snacks and fast foods. Instead, choose fresh fruits and low-sodium foods as snacks.

Consumption of processed foods such as chicken nuggets, meatballs and meat burgers that contain high sodium should be limited. It is advisable to choose low salt options or home-made processed foods with less salt.

**Factbox**

According to a survey, Malaysian Chinese have the highest intake of salt, averaging almost 3,000mg daily.

One teaspoon, or 5g of salt, provides 2,000mg of sodium.



Osteoporosis (brittle bones) can be worsened by excessive salt intake.

Excess sodium intake is associated with urinary stones.

per day.

The salt added in cooking and present in sauces and seasonings represent the major sources of sodium in our diet. Many of our dishes make use of ingredients such as soy, oyster and fish sauces as well as prawn paste, which are all high in sodium. Hence, this key message on reducing salt intake also includes cutting down on sauces.

Some dishes also use excessive amounts of flavour enhancers such as monosodium glutamate (MSG) and flavouring cubes. The consumption of highly salted fish, egg and vegetables are also not uncommon.

Malaysians also frequently eat "outside" foods, either as take-aways or eaten at the food premises itself. These foods could be rather salty, and are frequently added with various sauces and seasonings. These include various local dishes from coffee shops, cafes, restaurants as well as franchise fast food outlets.

## Approaches to reducing salt/ sodium intake

The Malaysian Dietary Guidelines have recommended limiting salt intake to no more than one teaspoon (2,000mg sodium) per day.

This should take into account total sodium intake from all dietary sources, for example, additives such as monosodium glutamate and preservatives such as sodium nitrate and sodium benzoate.

Various strategies are required to reduce salt intake. (For details of the dietary guideline recommendations, read *MDG Key Message 9*.)

The first approach would be to use less salt and seasonings in cooking at home. Instead, use various natural herbs and condiments to add flavour to your cooking. It is therefore recommended that you try preparing your meals such that you can control the amount of salt and sauces used.

The second approach relates to choosing foods with less salt and sauces when purchasing foods away from home, either as takeaways or when dining out. Malaysians eat out a lot, and with widespread use of salt and seasonings, large amounts of sodium can be ingested. It is therefore important to choose dishes wisely when dining out. Ask for less salt!


Consumers should read the nutrition information panel (NIP) and find out the amount of sodium in foods they intend to purchase.

The third approach would be to reduce the salt content of processed foods and drinks. Consumers should read the nutrition information panel (NIP) and find out the amount of sodium in foods they intend to purchase.

Although it is currently not compulsory to include sodium content in NIPs, many food items have voluntarily included this in the list. Use the NIP to compare the sodium content of different brands of similar products.

As a further guide to food choice, you can look for claims on the label that say "low sodium", "very low sodium" or "sodium free".

These claims are permitted by the Health Ministry for products that contain low or very low amounts of sodium as specified by the food regulations.

## You can do it

Those who are used to a higher salt intake will at first miss the taste of salt when they begin a lower salt intake. But the palate soon adapts to lower sodium levels, and people will eventually prefer foods with less salt.

Most people attempting to limit their salt intake are satisfied with many other ways of adding flavour to their foods and do not miss salt after their palates have adapted.

You can also do it. Make that change. Use less salt and sauces in your cooking. Ask for less salt when eating out. Read the NIP and purchase foods with less sodium.

Let the MDG 2010 guide you and your family members in adopting healthy eating habits and an active lifestyle.

The complete MDG is obtainable from the Health Ministry website: *www.moh.gov.my/v/diet*. The Nutrition Society of Malaysia has also made available leaflets of those MDG suitable for the public (*www.nutriweb.org.my*).

■ *Dr Tee E Siong pens his thoughts as a nutritionist with over 30 years of experience in the research and public health arena. For more information, email starhealth@thestar.com.my.*