

# More than a thirst-quencher

Water is an essential nutrient required for life, and we need to ensure that we get enough of it.

By Dr TEE E SIONG

**M**ANY people tend to take drinking water for granted; people drink water only to quench thirst.

We ought to pay closer attention to water as it is actually an essential nutrient, required for many metabolic processes in the body.

Water is required for digestion, absorption and transportation, and as a solvent for nutrients.

It is also required for removal of waste products from the body and heat regulation.

We should actually be drinking water regularly, even when we are not thirsty.

Allow me to highlight the importance of drinking sufficient water daily, which is also the 11th key message of the Malaysian Dietary Guidelines (MDG) 2010. (See *Tips on water*)

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 with nine of the key messages in previous articles.

## A vital fluid

Water is a substance with the chemical formula H<sub>2</sub>O – one molecule of water has two hydrogen

atoms bonded to a single oxygen atom. It is a tasteless, odourless liquid at room temperature and pressure, and appears colourless.

Water is the main chemical constituent of the human body, and can make up to an average of 60% of a person's body weight. This high percentage is an indication of the importance of water to the human body.

The total amount of water in a person varies considerably, ranging from approximately 45 to 75%. This variability is mainly due to differences in body composition.

Water is needed for many vital life processes.

All biochemical reactions occur in it.

It fills the spaces in and between cells, and helps form the structures of large molecules, such as protein and glycogen.

And as mentioned earlier, it aids in digestion, the absorption and transportation of nutrients, elimination of waste products, and body temperature regulation.

## Replacing water

The body naturally loses water throughout the day. These losses must be replaced by sufficient fluid intake.

Without adequate fluid intake, people can become dehydrated. Dehydration is excessive loss of body water.

There are a number of causes of dehydration including heat exposure, prolonged vigorous exercise, vomiting, diarrhoea, kidney disease, and taking of diuretic medications.

Dehydration can lead to fatigue, weakness, headache, irritability, dizziness, and even impaired physical performance.

There are certain circumstances or conditions under which people would require more fluid intake.

For example, people need more fluids when they are physically active. For most very active people, water is all they need to stay hydrated.

People also need more fluids in hot weather. Those most at risk of becoming dehydrated are young children and older adults.

The dietary guidelines therefore, recommend drinking an extra two glasses of plain water with increased physical activity and sweating.

Lactating women are also encouraged to consume two extra glasses of water daily to help in milk production for their breastfed babies. Prior to that, women already have a slightly increased water requirement during pregnancy.

It would also be useful to bear in mind that certain beverages can have a diuretic action, ie make the body produce more urine.

Drinking alcoholic beverages, for example, makes a person urinate more, and this could increase the risk of becoming dehydrated.

## Tips on water

The Malaysian Dietary Guidelines (MDG) 2010 recommends the following actions to ensure that we drink plenty of water daily.



- 1 Drink six to eight glasses of plain water daily
  - Drink one to two glasses of plain water at breakfast and between meals.
  - Ensure plain water is available all the time.
  - Drink plain water regularly even when you are not thirsty.
  - Drink at least an extra two glasses of plain water with increased physical activity and sweating.
- 2 Maintain fluid intake from other food sources
  - Continue intake of other fluid sources such as soups, beverages and juices, preferably low in fat and sugar.
- 3 Avoid alcoholic beverages
  - Choose non-alcoholic sparkling juice instead.

### Children

Those between two to six years old require four to six glasses of plain water, as excessive intake of water may displace intake of nutritious foods and milk.

### Lactating mothers

These mothers need to increase water intake up to at least an extra two glasses daily.

### The elderly

- > Remind and encourage the elderly to drink sufficient plain water.
- > They should also be advised to continue intake of other fluid sources such as fruits and vegetables, juices and soups.
- > Caregivers of the elderly should reassure them that they can request plain water or beverages at any time.



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Source: MDG 2010



Playing with water during hot weather cools off your body outside, but your body inside needs extra amounts of water as well. Young children are especially at risk of becoming dehydrated.

Alcoholic beverages are therefore, not recommended to satisfy thirst, or to be consumed to rehydrate the body.

Caffeinated drinks, such as coffee and tea, were also believed to have a diuretic effect.

However, more recent data have shown that caffeine does not act as a diuretic when consumed in moderate amounts.

Current evidence suggests that caffeinated beverages contribute to the body's daily fluid requirements no differently from plain water.

## Think about your drinks

It is therefore important to adequately hydrate our body.

Hydration is the process of providing an adequate amount of liquid to body tissues. To achieve this, all types of fluids can be considered, including water from fluids (drinking water, soups and other beverages), and the water that is contained in foods.

Plain water is a safe and low-cost way to ensure adequate fluid intake without additional dietary energy.

Hence, ensure that plain drinking water is available at all times in the home and workplace. For children, prepare drinking water for them to bring along to school.

Beverages can contribute to a significant amount of water intake. However, although beverages provide the needed water, their calorie content varies widely.

Some of the popular beverages, including carbonated drinks, flavoured fruit drinks and cordials, contain significant amount of calories, but provide few or no essential nutrients (eg vitamins and minerals).

It is not recommended to quench your thirst using beverages that add extra sugar and calories to the daily diet.

Alcoholic beverages (eg beer and wine) also contribute to energy intake without other nutrients, as one gram of alcohol contains approximately 7 kcal, almost similar to that contained in fat (9 kcal).

On the other hand, other beverages, such as milk and 100% fruit juice, provide a substantial amount of nutrients along with the calories they contain. Unsweetened beverages such as coffee and tea, also do not contain added calories.

It is therefore useful to select the appropriate type of beverage for consumption, and it should be planned in the context of other foods consumed daily, and the total calorie intake.

Soups are common amongst various community groups.

The calorie content of soups also varies considerably, depending on the ingredients.

Soups boiled with meat, especially fatty meat, could contain a fair amount of energy. Those clear soups with minimal oil or fat added are to be preferred.

Foods contain water, and a varied diet will contribute to water requirements. Some fruits do contribute to meeting water needs.

However, the main recommendation to meet total water needs is to drink an adequate amount of water daily.

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