

A closer look at
Nutrition Labelling

ENERGY AND NUTRIENTS



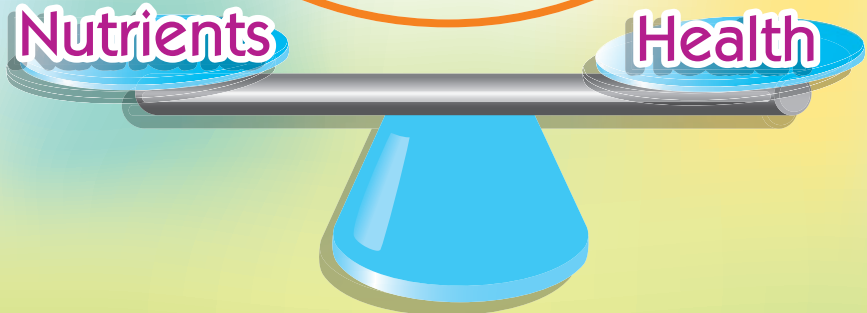
食物安全中心
Centre for Food Safety

WHAT ARE NUTRIENTS?

Nutrients are substances present in food which can provide energy, promote growth and development as well as maintain normal functions of the body. Deficiency or excessive intake of nutrients may lead to diseases such as heart diseases, diabetes mellitus and certain types of cancer. Even though causes of these diseases are often multifactorial, diet is considered as one of the important factors. Reading nutrition label can help you make informed food choice so as to achieve a balanced diet and stay healthy.

Nutrients

Health



MANDATORY INFORMATION IN THE NUTRITION LABEL

Under the Nutrition Labelling Scheme, nutrition label must include the content information of energy and seven nutrients specified for labelling (“1+7”), namely, protein, total fat, saturated fat, trans fat, carbohydrates, sugars and sodium from 1st July 2010. To better understand and use the nutrition label, it is important for you to know more about the roles of these “1+7”:



Energy / Nutrients

Functions/ Health Effects

What You Should Know

Energy
(please refer to
Annex for
further details)

- ➔ Supports activities of human body.
- ➔ Getting too much energy increases the risk of overweight and obesity, leading to increased risk of heart diseases, diabetes and certain types of cancer.

- ➔ Energy requirement depends on age, gender, body weight and activity level:
 - e.g. a saleslady with 56 kg body weight, mostly standing during work, needs about 2000 kcal a day.
- ➔ Body weight is associated with energy balance. If energy intake is higher than energy expenditure, body weight will increase. If energy intake is lower than energy expenditure, body weight will decrease.
- ➔ Units of energy in food include kilocalories (kcal) and kilojoules (kJ).
 - 1 kcal ≈ 4.2 kJ



<i>Energy / Nutrients</i>	<i>Functions/ Health Effects</i>	<i>What You Should Know</i>
Carbohydrates	<p>➔ Provide major source of energy for the body.</p> <ul style="list-style-type: none">● 1 g of carbohydrates provides 4 kcal	<p>➔ For a 2000-kcal diet, one should get about 300 g of carbohydrates daily*.</p> <p>➔ Available carbohydrates = Total carbohydrates – Dietary fibre</p>
Sugars	<p>➔ Sugars provide energy for the body but have no other nutritional value. Getting too much sugars may lead to excessive energy intake, increasing the risk of overweight and obesity. Frequent and excessive intake of sugars can also cause dental caries.</p> <p>➔ Sugars, in the form of glucose, serve as an immediate energy source for the brain.</p>	<p>➔ For a 2000-kcal diet, one should get not more than 50 g of sugars daily*.</p> <p>➔ Examples of foods with naturally occurring sugars:</p> <ul style="list-style-type: none">● Honey, syrups, fruit, milk <p>➔ Examples of foods with added sugars:</p> <ul style="list-style-type: none">● Sweetened fruit juices and soft drinks, candies, chocolates, cookies





<i>Energy / Nutrients</i>	<i>Functions/ Health Effects</i>	<i>What You Should Know</i>
Protein	<ul style="list-style-type: none">➔ Essential for growth, building muscle, bones and teeth.➔ Repairs body tissues.➔ Provides energy.<ul style="list-style-type: none">● 1 g of protein provides 4 kcal	<ul style="list-style-type: none">➔ For a 2000-kcal diet, one should get about 60 g of protein daily*.➔ Children, adolescents, pregnant and lactating women need higher amount of protein.
Total fat	<ul style="list-style-type: none">➔ A concentrated source of energy (1 g of fat provides 9 kcal). Eating too much fat is linked to increased risk of overweight and obesity, leading to increased risk of heart diseases, diabetes and certain types of cancer.➔ Essential for maintaining the function of cell membranes as well as transporting and storing fat-soluble vitamins including vitamin A, D, E and K.	<ul style="list-style-type: none">➔ For a 2000-kcal diet, one should get not more than 60 g of fat daily*.➔ 1 tablespoon of oil provides about 14 g of fat.

Energy / Nutrients	Functions/ Health Effects	What You Should Know
Saturated fat	<ul style="list-style-type: none"> Both saturated fat and trans fat raise the level of low-density lipoprotein ("bad") cholesterol in the blood. 	<ul style="list-style-type: none"> For a 2000-kcal diet, one should get not more than 20 g of saturated fat daily*.
Trans fat	<ul style="list-style-type: none"> Trans fat also lowers the level of high-density lipoprotein ("good") cholesterol in the blood. Eating too much saturated fat and trans fat increases the risk of heart diseases. 	<ul style="list-style-type: none"> For a 2000-kcal diet, one should get not more than 2.2 g of trans fat daily*.
Sodium	<ul style="list-style-type: none"> Eating too much sodium increases the risk of high blood pressure. A small amount of sodium is needed to maintain body fluids balance and help transmit nerve impulse. 	<ul style="list-style-type: none"> Limit sodium intake to not more than 2000 mg a day. The chemical name of salt is sodium chloride (NaCl). The major dietary intake of sodium is from salt. Sodium can also be found in monosodium glutamate (MSG), soy sauce and seasoning sauces. 1 level teaspoon of salt provides 2000 mg of sodium.

* Individual intake amounts may be higher or lower depending on energy requirements.



Under the Nutrition Labelling Scheme, in addition to energy and the seven nutrients specified for labelling, you will also find nutrition information on those nutrients that are the subjects of nutrition claims, as well as other nutrients that may be voluntarily included in the nutrition label. If a nutrition claim is made on any type of fat (e.g. total fat, saturated fat and trans fat), the amount of cholesterol must be provided as well. Moreover, the amount of dietary fibre will also be listed out if the amount of carbohydrates is presented as “Total Carbohydrates”.

<i>Nutrients</i>	<i>Functions/ Health Effects</i>	<i>What You Should Know</i>
Cholesterol	<ul style="list-style-type: none"> ➔ Cholesterol can be produced by our own body and is essential for maintaining the normal function of cells, synthesizing hormones, vitamins and bile in body. ➔ High blood cholesterol is a risk factor for heart diseases. 	<ul style="list-style-type: none"> ➔ Limit cholesterol intake to not more than 300 mg a day.
Dietary fibre	<ul style="list-style-type: none"> ➔ There are two types of dietary fibre: <ul style="list-style-type: none"> ● Soluble fibre may help to lower blood cholesterol level and stabilise blood sugar level ● Insoluble fibre is important for proper bowel function ➔ Food rich in dietary fibre can also help weight management. 	<ul style="list-style-type: none"> ➔ One should aim to increase intake of dietary fibre. For an average adult, eat not less than 25 g per day.

Energy requirement varies among individuals. It is affected by a number of factors including age, gender, body weight and physical activity level. As a general reference, the average daily energy requirements of people of different age groups, gender and physical activity levels are summarised in Table 1 below:

Average Daily Energy Requirement (kcal)

Physical Activity Level (PAL)	Male	Female
18-49 years old		
Light	2420	1955
Moderate	2779	2055
Heavy	3278	2280
50-59 years old		
Light	2404	1976
Moderate	2761	2079
Heavy	3257	2306

Reference weight for male: aged 18-49 (63 kg); aged 50-59 (65 kg)

Reference weight for female: aged 18-49 (56 kg); aged 50-59 (58 kg)

Table 1: Average daily energy requirements of male and female aged 18 to 59⁺

(Source of information: 中國居民膳食營養素參考攝入量 Chinese DRIs(簡要本), 中國營養學會 2001)



Annex

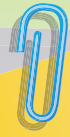
Energy requirements vary at different stages of body development. Children and adolescents need extra amount of energy to support their rapid growth as well as increased physical activity levels. Pregnant and lactating women also require additional energy to maintain normal growth of foetus and for milk production respectively. However, for an average adult, the energy requirement usually decreases as the age goes up.

On the other hand, depending on the occupation and daily activities people are engaged in, their physical activity levels (as shown in Table 2) do vary and so do their energy requirements. For example, the energy requirements of athletes and people engaged in occupation that requires heavy physical activities such as labour workers are higher when compared to those who have a sedentary occupation such as office workers.

<i>Physical Activity Level (PAL)</i>	<i>Examples of Occupation</i>
Light	Office workers, salesperson, lecturers, hotel attendants
Moderate	School workers, electricians, professional drivers
Heavy	Athletes, dancers, construction workers

Table 2: Physical activity level of people with different occupations.





Annex

Energy has close association with body weight. When our energy intake is greater than energy output, weight goes up. When our energy intake is lower than energy output, weight goes down. Therefore, it is important to pay attention to the balance between energy intake and output in order to maintain a healthy body weight.

† The information provided is for reference only. People should adjust their daily energy requirement according to their own conditions (e.g. whether they have chronic diseases, or whether they are overweight or obese etc) or consult health professionals for further advice.



THIS PAMPHLET IS PREPARED BY THE TASK FORCE ON NUTRITION LABELLING EDUCATION COMPRISING MEMBERS FROM:

- Association of Hong Kong Nursing Staff
- Centre for Health Education and Health Promotion, The Chinese University of Hong Kong
- Committee on Home-School Co-operation
- Consumer Council
- Department of Health
- Education Bureau
- Food and Environmental Hygiene Department
- Hong Kong Dietitians Association
- Hong Kong Nutrition Association
- Hospital Authority
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