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## NUTRIENTS CLASSIFICATION

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**How many nutrients are there in our food?**

**More than forty different nutrients can be found in a well-balanced diet, and these nutrients can generally be divided into seven categories:**

- **Carbohydrates**
- **Proteins**
- **Fats**
- **Vitamins**
- **Minerals**
- **Dietary fiber**
- **Water**

**Why are these nutrients important to us?**

**Each of the nutrients has a unique role, they all work hand in hand, as a whole, to make our body healthy and for it to function properly. Therefore, all of these nutrients are indispensable, the lacking of any one of them can greatly impact our health.**

### *Major Functions of the Nutrients:*

#### *Carbohydrates*

Carbohydrates are the primary source of energy to fuel our body, the USDA recommends about 45 to 65 percent of our total caloric intake to be obtained from carbohydrates. Common food sources of carbohydrates include starches, starchy vegetables, fruits and dairy products.

#### *Proteins*

Proteins are essential for the construction and maintenance of our muscle mass. Our body requires muscles for movement, those muscles are used to stabilize our joints, maintain our postures, and to help generate heat during activities. USDA recommends about 10 to 35 percent of our intake from proteins, meat, poultry, seafood, egg, dairy, and legumes are some common sources of protein rich foods.

#### *Fats*

Fats are significant sources of energy for our body, they are needed for the absorption of fat-soluble vitamins like vitamin A, D, E and K. The USDA recommends 20 to 35 percent of our

caloric intake from fats. Fats in our body act as cushion that protect our internal organs from damages and they also help us to maintain a steady body temperature. Fats can be found in a variety of foods including meat, seafood, dairy products, nuts, seeds, and oils.

### ***Vitamins***

Vitamins are organic compounds which our body requires a trace amount to maintain health. While there are 13 vitamins that our body needs for growth and development, they all serve a different function in our body and are found from different food sources. Vitamins are either water-soluble or fat-soluble. Fat-soluble vitamins can be stored in our body for a short period of time, but still, they should be replenished frequently.

### ***Minerals***

Similar to vitamins, minerals are inorganic compounds that our body needs only in a small amount. Minerals are critical for the maintenance of fluid balance, muscle contraction, and signaling of our nervous system. Some minerals are also involved in the composition of our body structures, for example, our bones are composed of calcium and adequate calcium intake helps with bone health promotion.

### ***Dietary Fibers***

Dietary fibers are primarily found in fruits, vegetables, and whole grains. They are the indigestible part of plants, and can briefly be categorized into soluble and insoluble fibers. Dietary fibers add bulk to feces, promote bowel movement which in turn prevent constipation. The recommended intake of dietary fibers is 25 grams per day for women, and 38 grams a day for men.

### ***Water***

Water composes about 60 percent of our body weight, it is the most abundant substance in our body and an important nutrient for health maintenance. Water is needed to regulate body temperature, maintain fluid balances, nutrient transportation, and metabolism.





## 營養素的分類

### 食物中含有多少種營養素？

食物能提供逾四十種的營養素，這些營養素一般可分為以下七大類：

- 碳水化合物
- 蛋白質
- 脂肪
- 維生素
- 礦物質
- 膳食纖維
- 水分

### 為何這些營養素對身體非常重要？

雖然七大類營養素在身體中的功用各異，但要透過它們互相配搭合作，身體才會健康，所以各種營養素缺一不可。以下列出這些營養素的主要功用：

#### 碳水化合物

碳水化合物為身體的主要熱量來源，主要由穀物類食物提供，如飯、粉麵等。此外，水果、根莖蔬菜、乾豆類和奶類等食物亦含碳水化合物。

#### 蛋白質

肉、魚、海產、蛋、奶類製品、乾豆類及豆製品是蛋白質的主要來源，其主要功能包括製造、修補及維持健康的身體組織。

#### 脂肪

脂肪見於肉、魚、海產、奶類製品、果仁、種子及油等食物中。脂肪是其中一種熱量的來源，它使身體能在寒冷天氣中保持體溫及保護體內器官免受震盪。它也是構成細胞的一部分，並負責運送脂溶性維生素，如維生素A、D、E、K。

#### 維生素

不同種類食物能提供不同的維生素，這些維生素能促進不同的身體機能，如維持皮膚毛髮健康，構成骨骼，以及釋放、運用食物中的熱量。維生素可分為水溶性及脂溶性兩類。

#### 礦物質

礦物質能調節身體多項功能，包括體液平衡、肌肉收縮及神經訊號傳送，是一種十分重要的營養素。某些礦物質也是身體結構的一部分，例如鈣質有助構成健康強壯的骨骼。

#### 膳食纖維

膳食纖維是植物中不能被人體消化的部分，它有助穩定血糖及促進腸道健康，預防便秘。膳食纖維可分為水溶性及非水溶性兩類。

#### 水分

水分是體內最多的物質，也是維持身體健康的重要營養素。它主要功用包括調節體溫、製造體液、輸送養分、氧氣及移走廢物。

Reference:

<https://www.chp.gov.hk/tc/static/100022.html>

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