

# nutrients for health



The human body needs nutrients to function. Nutrients are essential for maintaining normal bodily functions and preventing health problems. Protein, fats, carbohydrates, minerals and vitamins are all essential nutrients. Your body uses different nutrients for different purposes, so it is important to provide your body with a balance of all essential nutrients. To ensure this, consume a balance of a wide variety of food types.

## Protein

Protein is crucial to the human body, and is essential for the formation of cells, immune function, repairing tissue, and producing enzymes and hormones. Protein is also the major building block of the brain, muscle, skin, hair, and connective tissue. The easiest way to ensure your body has enough protein is to eat meat, poultry, fish and dairy products. It is recommended that adults eat approximately 150gms of meat (or meat alternatives) a day and roughly the equivalent of 3 glasses of milk. If you are vegetarian, you need to get adequate protein from beans, grains, vegetables. High protein options include nuts and seeds, pulses, and soy products. Eating a combination of these products will provide you with a diet sufficient in protein.

## Carbohydrates



Your body requires carbohydrates for energy. There are two types: complex and simple carbohydrates. Foods high in complex carbohydrates include wholegrain breads and cereals, rice, potato, and pasta, dairy products and some fruits. These foods are broken down slowly by the digestive system, and provide the body with energy over a longer period of time. Simple carbohydrates are found in foods such as sugars, honey and some fruits, and are broken down quickly by the digestive system. Your body needs 200 to 300gms of carbohydrates each day. It is recommended that carbohydrates form 55-60% of total daily caloric intake.

## Fats

Many people feel that all fat is bad for their health. However, this is not the case. Fats only become a problem when more than the recommended amount is consumed. Fats support organ structure and are the only source of the essential fatty acid called linoleic acid, which is required for growth and is one of the components of hormones and cell membranes. Fats also carry vitamins such as Vitamin A, D, E and K, and keep you feeling full and satisfied between meals.

It is recommended that fats form 30% of daily energy intake. This amounts to approximately 50 grams of fat per day. There are 4 types of fat:

- ◇ *Saturated fat* contains the maximum number of hydrogen atoms, and is found in butter. Saturated fat can increase blood cholesterol levels. Consumption of this form of fat should be limited.
- ◇ *Monounsaturated fat* has one pair of hydrogen atoms less than saturated fat, and is the healthiest form of fat. Monounsaturated fat is found in olive oil and can lower levels of the harmful carrier of cholesterol.
- ◇ *Polyunsaturated fat* has more than one pair of hydrogen atoms missing, and is found in thin oils used in cooking and salad dressings. This group contains the fatty acids omega-3 and omega-6. Sources include some fish, canola or linseed oils, seeds/nuts and egg yolk.
- ◇ *Hydrogenated fat* is produced by adding hydrogen atoms to unsaturated vegetable fats. As they do not occur in nature, the body has difficulty digesting hydrogenated fats. Hydrogenated fats are commonly found in margarine and higher fat junk food, and these fats should be taken in limited amounts.

## Minerals

A number of minerals are essential for life, including:  
**Calcium:** essential for bone health, muscle contraction, nerve conduction, blood clotting, and maintaining connective tissue. If your diet is insufficient in calcium in the long-term, this can lead to osteoporosis. Good sources of calcium include dairy products, sardines, salmon with bones, and tofu.

**Iron** is essential for strength, energy, supplying oxygen to body tissue, and supporting the immune system, and brain functioning. Females require more iron than males and have lower stores of iron. Best dietary sources of iron: red meats, seafood, poultry, beans and fortified breakfast cereals.



**Zinc** deficiencies can affect growth and development, the immune system, skin and cell health, and metabolic processes. Foods high in Zinc include red meats and poultry, some shellfish and dairy products. Zinc intake correlates well with a good dietary protein intake.

## Vitamins

The human body requires vitamins to function. Every vitamin has a different role. Vitamin functions are wide ranging, and are needed for the health of teeth, bone, skin, vision, the nervous system, body tissues and blood vessels. To ensure you are obtaining all the necessary vitamins, it is important to eat a wide variety of foods.

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