

Definition

1. Nutrition is the sum total of the processes involved in the taking in and the utilization of food substances by which growth, repair and maintenance of the body are accomplished. It involves ingestion, digestion, absorption and assimilation. Nutrients are stored by the body in various forms and drawn upon when the food intake is not sufficient. (Health Guidance)
2. The Council on Food and Nutrition of the American Medical Association defines nutrition as "The science of food, the nutrients and the substances therein, their action, interaction, and balance in relation to health and disease, and the process by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances"
Intake

Good nutrition can help prevent disease and promote health. There are six categories of nutrients that the body needs to acquire from food: protein, carbohydrates, fat, fibers, vitamins and minerals, and water.

Proteins

Protein supplies amino acids to build and maintain healthy body tissue. There are 20 amino acids considered essential because the body must have all of them in the right amounts to function properly. Twelve of these are manufactured in the body but the other eight amino acids must be provided by the diet. Foods from animal sources such as milk or eggs often contain all these essential amino acids while a variety of plant products must be taken together to provide all these necessary protein components.

Fat

Fat supplies energy and transports nutrients. There are two families of fatty acids considered essential for the body: the omega-3 and omega-6 fatty acids. Essential fatty acids are required by the body to function normally. They can be obtained from canola oil, flaxseed oil, cold-water fish, or fish oil, all of which contain omega-3 fatty acids, and prunose ^{flower} or black currant ^{fruit} seed oil, which contains omega-6 fatty acids. Increased consumption of omega-3 oils is recommended to help reduce risk of cardiovascular diseases and cancer and many other diseases. A diet low in fat also promotes good health and prevents many diseases. Low-fat diets can help treat or control the conditions like Obesity, Diabetes and Breast cancer.

Carbohydrates

Carbohydrates are the body's main source of energy and should be the major part of total daily intake. There are two types of carbohydrates: simple carbohydrates (such as sugar or honey) or complex carbohydrates (such as grains, beans, peas, or potatoes). Complex carbohydrates are preferred because these foods are more nutritious yet have fewer calories per gram compared to fat and cause fewer problems with overeating than fat or sugar. Complex carbohydrates also are preferred over simple carbohydrates by diabetics because they allow better blood glucose control.

Fiber

Fiber is the material that gives plants texture and support. Although it is primarily made up of carbohydrates, it does not have a lot of calories and is usually not broken down by the body for energy. Dietary fiber is found in plant foods such as fruits, vegetables, legumes, ^{beans and lentils} and whole grains. A high-fiber diet helps prevent or treat the health conditions like High cholesterol levels, Constipation, Diabetes, Obesity and cancer

Vitamins and minerals

Vitamins are organic substances present in food and required by the body in a small amount for regulation of metabolism and maintenance of normal growth and functioning. The most commonly known vitamins are A, B₁ (thiamine), B₂ (riboflavin), B₃ (niacin), B₅ (pantothenic acid), B₆ (pyridoxine),

B₇ (biotin), B₉ (folic acid), B₁₂ (cobalamin), C (ascorbic acid), D, E, and K. The B and C vitamins are water-soluble, excess amounts of which are excreted in the urine. The A, D, E, and K vitamins are fat-soluble and will be stored in the body fat.

Minerals are vital to our existence because they are the building blocks that make up muscles, tissues, and bones. They also are important components of many life-supporting systems, such as hormones, oxygen transport, and enzyme systems.

Water

Approximately 60% of the adult human body is composed of water. Water also functions as the environment in which water-soluble foodstuff is absorbed in the intestines and the waste products are eliminated in urine. Another essential role of water is to maintain body temperature through evaporation, as in sweating. Severe dehydration will result in cardiovascular collapse and death. The estimated water requirement of an average adult is two liters per day.

Nutrition and Women's Health

For many women, running a home, bringing up children and taking care of elderly relatives, as well as working outside the home, can influence their physical and mental well-being. Ensuring good nutrition and a healthy lifestyle can contribute significantly to women's health throughout their lives.

Rapid growth during adolescence, menstruation and the demands of pregnancy and lactation can result in an increased risk of low levels of nutrients such as iron, folic acid and calcium. Surveys of nutritional status frequently demonstrate chronic shortages of these nutrients, not only in a woman's earlier years but extending through into later life. Low-energy diets, slimming regimes, eating disorders and the increasing number of vegetarians make women even more vulnerable to nutritional inadequacies.

The Importance of Iron

Women of childbearing age have increased iron needs and hence are at risk of iron-deficiency anemia. It is important for them to eat those foods that are not only rich in iron but are also eaten in significant quantities and from which iron is reasonably well absorbed. Haem iron from hemoglobin, present in meat and meat products, is well absorbed. Sources of non-haem iron include green vegetables, baked beans, peanuts and fortified breakfast cereals. Dietary sources of vitamin C are also significant because they improve the absorption of non-haem iron.

Folic Acid and Pregnancy

All women of childbearing age who are capable of becoming pregnant should also consume additional folic acid every day for the purpose of reducing the risk of having a pregnancy affected with spina bifida and other neural tube defects. Folate requirements increase substantially during pregnancy, and it is generally recommended that women of childbearing age should consume an extra 400 mg of folate daily from supplements, fortified foods, or both, in addition to consuming folic acid from a wide variety of foods, including offal and raw green leafy vegetables.

Calcium for Strong Bones

Calcium is an important factor in bone mineralization and skeletal development during growth, and the main sources are milk, cheese, yogurt and green vegetables. Already it is apparent that some young children and adolescents seem to reduce their intake of calcium just at a time when their need is greatest, and the impact on bone health is compounded by a decline in physical activity. Along with other nutrients such as folic acid, vitamins B₆, B₁₂, C and D, which help build up the framework of bone onto which the calcium deposits, there is a need to ensure optimal calcium nutrition at this time of skeletal development as well as during the pre- and post-menopausal states. The decreased estrogen production in menopausal women is associated with accelerated bone loss and osteoporosis in women.

after their fifth decade. During this time, women lose on average about 3% of their skeletal mass per year.

With rising life expectancy exceeding that of their male ^{follow} counterparts, women can expect to reach the age of 80 or more, and since the age of menopause has not greatly changed, a woman can anticipate ^{expect} spending 30 years-nearly one third of her life-in a post-menopausal state. It is therefore essential to promote positive nutrition practices, by encouraging a varied and balanced diet among women throughout all their life stages to ensure their own health and well-being, as well as that of their offspring.