

Third class / 2022-2023

Dr.Ameera Jasim

Nutrition During Adolescence and Older Adults

ADOLESCENTS

In general, a person between the ages of 13 and 20 is considered an adolescent. Adolescence is a period of rapid growth that causes major changes. It tends to begin between the ages of 10 and 13 in girls and between 13 and 16 in boys . These changes are obvious and have a tremendous effect on an adolescent's psychosocial development. No two individuals will develop in the same way.

One girl may become heavier than she might like, another may be thin, a boy may not develop the muscle or the height he desires. It can be a time of great joy, but it also can be a time when counseling is needed.

Food Habits

Adolescents, especially boys, typically have enormous appetites. When good eating habits have been established during childhood and there is nutritious food available, the teenager's food habits should present no serious problem. Adolescents are imitators, like children, but instead of imitating adults, adolescents prefer to imitate their **peers** and do what is popular.

Unfortunately, the foods that are popular often have low nutrient density such as potato chips, sodas, and candy. These foods provide mainly carbohydrates and fats and very little protein, vitamins, and minerals, except for salt, which is usually provided in excess. Adolescents' eating habits can be seriously affected by busy schedules, part-time jobs, athletics, social activities, and the lack of an available adult to prepare nutritious food when adolescents are hungry or have time to eat.

The adolescent has a natural desire for independence and may resent being told what to do. Before attempting to change an adolescent's food

Third class / 2022-2023

Dr.Ameera Jasim

habits, carefully check her or his food choices for nutrient content. It is too easily assumed that because the adolescent chooses the food, the food is automatically a poor choice in regard to nutrient content. It might be a good choice. An adolescent who has a problem maintaining an appropriate weight may need some advice regarding diet.

Calorie and Nutrient Needs

Because of adolescents rapid growth, calorie requirements naturally increase . Boys' calorie requirements tend to be greater than girls' because boys are generally bigger, tend to be more physically active, and have more lean muscle mass than do girls.

Except for vitamin D, nutrient needs increase dramatically at the onset of adolescence. Because of menstruation, girls have a greater need for iron than do boys. The DRIs for vitamin D, vitamin C, vitamin B12, calcium, phosphorus, and iodine are the same for both sexes. The DRIs for the remaining nutrients are higher for boys than they are for girls.

Fast Foods

Many people have become extremely fond of **fast foods**. Many others are highly critical of their nutrient content. Examples of these foods—most of which are favorites of teenagers—include hamburgers, cheeseburgers, French fries, milkshakes, pizza, sodas, tacos, chili, fried chicken, and onion rings.

Generally speaking, fast foods are excessively high in fat and sodium, as well as calories, and contain only limited amounts of vitamins and minerals (other than sodium) and little fiber. However, teens often use fast foods as a snack to hold them over until dinner, and this results in consumption of many extra calories.

Third class / 2022-2023**Dr.Ameera Jasim**

Tobacco

Cigarette smoking is addictive. Cigarette smoking by teenagers is very prevalent. Teenagers smoke to “be cool,” to look older, because they think it will help them lose weight, or because of peer pressure. Smoking can influence appetite, nutrition status, and weight. Smokers need the vitamin C plus 35 mg because smoking alters the metabolism. Low intakes of vitamin C, vitamin A, beta-carotene, folate, and fiber are common in smokers. Smoking increases the risk of lung cancer and heart disease.

Other Addictive Drugs

Methamphetamine is the most potent form of amphetamines. Amphetamines cause heart, breathing, and blood pressure rates to increase. The mouth is usually dry, and swallowing is difficult. Urination is also difficult. Appetite is depressed. The users’ pupils are dilated, and reflexes speed up. As the drug wears off, feelings of fatigue or depression are experienced. Street names include crank, speed, crystal, meth, zip, and ice.

Nutrition for the Athlete

Good nutrition during the period of life when one is involved in athletics can prevent unnecessary wear and tear on the body as well as maintain the athlete in top physical form. The specific nutritional needs of the athlete are not numerous, but they are important. The athlete needs additional water, calories, thiamine, riboflavin, niacin, sodium, potassium, iron, and protein.

The body uses water to rid itself of excess heat through perspiration. This lost water must be regularly replaced during the activity to prevent dehydration. Plain water is the recommended liquid because it rehydrates the body more quickly than sweetened liquids or the drinks that contain

Third class / 2022-2023**Dr.Ameera Jasim**

electrolytes. The “electrolyte” drinks are useful to replenish fluids after an athletic event but not during one. Salt tablets are not recommended because despite the loss of salt and potassium through perspiration, the loss is not equal to the amount contained in the tablets. If there is an insufficient water intake, these salt tablets can increase the risk of dehydration.

The increase in calories depends on the activity and the length of time it is performed. The requirement could be double the normal, up to 6,000 calories per day. Because carbohydrates, not protein, are used for energy, the normal diet proportions of 50% to 55% carbohydrate, 30% fat, and 10% to 15% protein are advised. There is an increased need for B vitamins because they are necessary for energy metabolism. They are provided in the breads, cereals, fruits, and vegetables needed to bring the calorie count to the total required. Some extra protein is used during training, when muscle mass and blood volume are increasing. This amount is included in the DRI for age and is provided in the normal diet. Protein needs are not increased by physical activity. In fact, excess protein can cause increased urine production, which can lead to dehydration. The minerals sodium and potassium are needed in larger amounts because of loss through perspiration. This amount of sodium can usually be replaced just by salting food to taste, and orange juice or bananas can provide the extra potassium.

A sufficient supply of iron is important to the athlete, particularly to the female athlete. Iron-rich foods eaten with vitamin C-rich foods should provide sufficient iron. The onset of menstruation can be delayed by the heavy physical activity of the young female athlete, and amenorrhea may occur in those already menstruating. When weight is a concern of the athlete, such as with wrestlers, care should be taken that

Third class / 2022-2023

Dr.Ameera Jasim

the individual does not become dehydrated by refusing liquids in an effort to “make weight” for the class. When weight must be added, the athlete will need an additional 2,500 calories to develop 0.45kg of muscle mass. The additional foods eaten to reach this amount of calories should contain the normal proportion of nutrients.

A high-fat diet should be avoided because it increases the potential for heart disease. Athletes should reduce calories when training ends. In general, the athlete should select foods using MyPyramid. The pregame meal should be eaten 3 hours before the event and should consist primarily of carbohydrates and small amounts of protein and fat. Concentrated sugar foods are not advisable because they may cause extra water to collect in the intestines, creating gas and possibly diarrhea.

Glycogen loading (carboloading) is sometimes used for long activities. To increase muscle stores of glycogen, the athlete begins 6 days before the events. For 3 days, the athlete eats a diet consisting of only 10% carbohydrate and mostly protein and fat as she or he performs heavy exercise. This depletes the current store of glycogen. The next 3 days, the diet is 70% carbohydrate, and the exercise is very light so that the muscles become loaded with glycogen. This practice may cause an abnormal heartbeat and some weight gain.

Currently, it is recommended that the athlete exercise heavily and eat carbohydrates as desired. Then, during the week before the competition, exercise should be reduced. On the day before competition, the athlete should eat a high-carbohydrate diet and rest. After the event, the athlete may prefer to drink fruit juices until relaxed and then satisfy the appetite with sandwiches or a full meal. Many athletes will use “power drinks” or “energy drinks,” . There are no magic potions or diet supplements that will increase an athlete’s prowess. *Steroid* drugs should not be used to

Third class / 2022-2023

Dr.Ameera Jasim

build muscles. They can affect the fat content of the blood, damage the liver, change the reproductive system, and even alter facial appearance. Good diet, good health habits, and practice combined with innate talent remain the essentials for athletic success.

Nutrition for Older Adults

The rate of aging varies. Each person is affected by heredity, emotional and physical stress, and nutrition. Research continues to reveal more about the causes of aging and the role of nutrition in the aging process.

THE EFFECTS OF AGING

As people age, **physiological**, psychosocial, and economic changes occur that affect nutrition.

Physiological Changes

The body's functions slow with age, and the ability of the body to replace worn cells is reduced. The metabolic rate slows; bones become less dense; lean muscle mass is reduced; eyes do not focus on nearby objects as they once did, and some grow cloudy from cataracts; poor **dentition** is common; the heart and kidneys become less efficient; and hearing, taste, and smell are less acute. If poor nutrition has been chronic, the immune system may be compromised. Osteoarthritis and its debilitating effects are of great concern to the elderly. Arthritis can limit the ability to perform activities of daily living (ADLs). The role that diet plays in arthritis has been of increasing interest to researchers.

Excessive weight, certain vitamin deficiencies, and the type of diet being followed may influence some types of arthritis. Eating a healthy, well-balanced diet that includes the "5 a day" fruits and vegetables, along with grain products, and sugar and salt in moderation, may be beneficial

Third class / 2022-2023

Dr.Ameera Jasim

for arthritis sufferers. Your physician or dietitian may also recommend taking a multiple vitamin daily. There appears to be no direct connection between a specific kind of food and a specific symptom of arthritis. Digestion is affected because the secretion of hydrochloric acid and enzymes is diminished. This in turn decreases the intrinsic factor synthesis, which leads to a deficiency of vitamin B12. The tone of the intestines is reduced, and the result may be constipation or, in some cases, diarrhea.

Psychosocial Changes

Feelings do not decrease with age. In fact, psychosocial problems can increase as one grows older. Age does not diminish the desire to feel useful and appreciated and loved by family and friends. Retirement years may not be “golden” if one suffers a loss of self-esteem from feelings of uselessness. Grief over the loss of a spouse or close friend, combined with the resulting loneliness, can be devastating. Physical disabilities that develop in the senior years and prevent one from going out independently can destroy a social life. Problems such as these can diminish a person’s appetite and ability to shop and cook.

Economic Changes

Retirement typically results in decreased income. Unless one has carefully prepared for it, this can affect one’s quality of life by reducing social activities, adding worry about meeting bills, and causing one to select a less than healthy diet by choosing foods on the basis of cost rather than nutrient content.

NUTRITIONAL REQUIREMENTS

Although the nutritional needs of growth disappear with age, the normal nutritional needs for maintaining a constant state of good health remain throughout life. Good nutrition can speed recovery from illness,

Third class / 2022-2023

Dr.Ameera Jasim

surgery, or broken bones and generally can improve the spirits and the quality, and even the length, of life. The protein requirement remains at the average 50 grams per day for women and 63 grams for men. This is based on the estimated need of 0.8 gram per kilogram of body weight. After age 65, it may be advisable to increase one's daily protein intake to 1.0 gram per kilogram of body weight.

In general, vitamin requirements do not change after the age of 51, except for a slight decrease in the DRIs for thiamine, riboflavin, and niacin. The need for these three vitamins depends largely on the calorie intake, and calorie requirement is reduced after the age of 51. The need for iron is decreased after age 51 in women because of menopause. The calorie requirement decreases approximately 1% to 2% a decade because metabolism slows and activity is reduced. If the calorie intake is not reduced, weight will increase. This additional weight would increase the work of the heart and put increased stress on the **skeletal system**. It is important that the calorie requirement not be exceeded and just as important that the nutrient requirements be fulfilled to maintain good nutritional status. An exercise plan appropriate for one's age and health can be helpful in burning excess calories and toning and strengthening the muscles.

FOOD HABITS

If the established food habits of the older person are poor, such habits will undoubtedly have been a long time in the making. These habits will not be easy to change. Poor food habits that begin during old age can also present problems. Decreased income during retirement, lack of transportation, physical disability, and inadequate cooking facilities may cause difficulties in food selection and preparation. Anorexia caused by grief, loneliness, boredom, depression, or difficulty in chewing can

Third class / 2022-2023

Dr.Ameera Jasim

decrease food consumption. Dementia and Alzheimer's may cause the elderly to think they have eaten when they may not have. Studies indicate that many senior citizens consume diets deficient in protein; vitamins C, D, B6, B12, and folate; and the minerals calcium, zinc, iron, and sometimes calories.

An elderly client's diet plan should be based on MyPyramid and the nutrients should be checked against the DRIs and AIs. Older persons' needs can vary considerably, depending on their conditions, so each person should be examined by a physician to determine specific requirements. If the client consumes less than 1,500 calories a day, a multivitamin-mineral supplement is recommended. Variety and nutrient-dense foods should be encouraged, as should water.

Water is important to help prevent constipation, to maintain urinary volume, to prevent dehydration, and to prevent urinary tract infections (UTIs). When there is serious protein and calorie malnutrition (PEM), the reason may be economic or psychosocial. Elderly people who have long hospital stays can develop PEM in the hospital. They may dislike the food, drugs may dull the appetite, and they may be lonely and depressed. Sometimes poor or missing teeth can make eating protein foods difficult. In such cases, protein-rich supplements can be used. If overweight is a problem, it may be caused by overeating, lack of exercise, drugs, or alcohol. Any adjustment in food habits will require great tact, and plans for changes must be based on the individual's total situation.

FOOD FADS

Some older people are consciously or unconsciously searching for eternal life, if not youth. Consequently, they are frequently susceptible to the claims of **food faddists** who seek to profit from their ignorance. Senior citizens spend money on unnecessary vitamins, minerals, and

special honey, molasses, bread, milk, and other foods that may be guaranteed by the salesperson to prevent or cure various diseases. This money could be much more effectively used on ordinary foods from MyPyramid that would cost considerably less.

SPECIAL CONSIDERATIONS FOR THE CHRONICALLY ILL OLDER ADULT

It is estimated that 85% of people over 65 have one or more chronic diseases or physical problems. Examples include osteoporosis, arthritis, cataracts, cancer, diabetes mellitus, hypertension, heart disease, and periodontal disease. The branch of medicine that is involved with diseases of older adults is called **geriatrics**

أكثر الأرواح سعادة، وأكثر
النفوس راحة تلك التي تحمل حس
الأمثنان في داخلها الشاكرة في كل
حال وحين التي تقدر كل نعمة
تملكها صغيرة كانت أو كبيرة
والتي تحمل العرفان لعطايا الرب
في حياتها فإنها ستجد الرضا
يغمرها والطمأنينة تكسوها
والهناء يعانق دروبها