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PG AND RESEARCH DEPARTMENT OF FOODS AND NUTRITION

CLASS: I B.Sc NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS

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SUBJECT NAME: WOMEN'S HEALTH AND WELLNESS

SYLLABUS

UNIT-I

Nutrition for Women - Dietary Guidelines for a healthy lifestyle, Current concepts pertaining to balanced diets, Nutrient requirement for adolescents, pregnant, nursing mother and older women with special focus on protein, iron, vitamin D , vitamin c folic acid , and calcium , factors affecting nutrient intake in women -socioeconomic environmental conditions, health conditions. Consequences of eating disorder in young women.

HEALTHY LIFESTYLE

Today we live in an automated society. Most of the activities that used to require strenuous physical can be accomplished by machines with the simple pull of a handle or push of a bottom. if people go to a store that is only a couple of blocks away most drive their automobiles and then spend a couple of minutes driving around the parking lot of 10 yards closer to the store entrances. the groceries do not even have to be carried out any more . a store employee willingly takes them out in a cart and places them in the vehicle. During a visit to a multi-level shopping mall nearly everyone closes to ride the escalators instead of taking stairs.

Concept of a Balanced Diet

A balanced diet can be defined as one which contains different types of foods in such quantities and proportions that the need for calories, minerals, vitamins and other nutrients is adequately met and a small provision is made for extra nutrients to withstand short duration of leanness.

CONCEPT OF A BALANCED DIET

If you look at the definition carefully, you would realize that a balanced diet

- consists of different types of food items
- meets the need for nutrients and
- Provides for periods of leanness when the diet may possibly not supply adequate amounts of all nutrients.

Let us talk about each of these aspects.

A balanced diet consists of different types of food items:

A balanced diet includes a variety of foods. But how do we select these foods? The major aim is to ensure that all nutrients are supplied. This can be achieved by first classifying food into groups--each group supplying certain specific nutrients and then selecting items from each food group to plan a balanced meal or diet. Including items from each food group ensures that all the nutrients will be supplied. These aspects will be clearer when you read through subsection which discusses the use of food groups in planning balanced diets.

A balanced diet meets the nutrient needs:

A balanced diet meets nutrient needs because of the amounts and proportions of the foods selected.

How much should a person consume of individual foods to meet his needs? This would be based on the recommended dietary intakes (RDIs) laid down for the individual for whom the diet is planned. You will study more about RDIs in the subsection.

Balanced diets provide for periods of leanness:

We have now examined the first two aspects of the definition of a balanced diet. Balanced diets also provide for periods of leanness. This implies that there is a "safety margin" or a "little extra" for those times when you do not meet your nutrient needs adequately. A normal individual consumes a variety of foods. It is possible that on a given day he may not consume foods in the amounts he requires. How, then, can we provide for

such periods of leanness? Actually we do not need to make any special adjustments because RDIs already include a margin of safety. Planning diets on the basis of RDIs would take care of this aspect as well

NUTRITION FOR WOMEN (DEFINITION)

A woman's overall healthy eating pattern also needs foods rich in key nutrients throughout her life, such as folic acid, iron, calcium and vitamin D. Being mindful of added sugar, salt and saturated fat and balancing energy intake (calories) with physical activity is also important

NUTRIENT REQUIREMENT FOR ADOLESCENTS

MINERALS

Minerals are required for the body's growth, development and the regulation of normal body function. They help to perform functions like - building strong bones, making hormones and enzymes.

During adolescence, there is an increase in skeletal mass and blood volume. The body thus requires the minerals like calcium, phosphorus, and iron.

CALCIUM

Calcium is taken in the diets to prevent osteoporosis in their later life. Calcium is present in dairy products like milk, yoghurt, cheese, paneer, green leafy vegetables, nuts,and seeds.

IODINE

Iodine intake helps to prevent thyroid gland related diseases. Iodine is used in the synthesis of thyroid hormones.

IRON

Iron is used in the formation of hemoglobin, required for blood production and brain development. Sources of iron-rich foods include jiggery, red meat, liver, red kidney beans, dates, fish, chicken, nuts, Indian gooseberry (Nelli), and dried fruits like dried apricots. Citrus fruits like oranges and lemons are rich in vitamin C that increases the absorption of iron.

Zinc

Zinc is important in adolescence because of its role in growth and sexual maturation. Males who are zinc deficient experience growth failure and delayed sexual development.

Vitamins

Vitamin A is important for normal vision and plays a vital role in reproduction, growth, and immune function. The most obvious symptom of inadequate vitamin A consumption is vision impairment, espe-cially night blindness. The low intake of fruits, vegetables and milk and dairy prod-ucts by adolescents contributes to their less than optimal intake of vitamin A.

Vitamin E is well known for its anti-oxidant properties, which become increas-ingly important as body mass expands dur-ing adolescence. Fortified breakfast cereals and nuts are good sources of vitamin E. Vitamin C is involved in the synthesis of collagen and other connective tissues

Fibre

Dietary fibre is important for normal bowel function, and plays a role in the prevention of chronic diseases, such as certain cancers, coronary artery disease, and type 2 diabe-tes mellitus and reduces the risk of obe-sity. Increased intake of fruit, vegetables, and whole grains increases the fibre intake. Adolescents who skip breakfast or do not routinely consume whole grain cereals are at high risk for having an inadequate con-sumption of fibre.

SOURCES OF CALCIUM AND IRON

Lack of iron in the diet causes anemia. To make up for the loss of iron, adolescents must have a diet rich in iron. In boys, iron deficiency occurs due to the muscle spurt, whereas in girls, it occurs due to menstruation in addition to the muscle spurt.

DEFINTION OF PREGNANT

Pregnancy is the term used to describe the period in which a fetus develops inside a woman's womb or uterus. Pregnancy usually lasts about 40 weeks, or just over 9 months, as measured from the last menstrual period to delivery. Health care providers refer to three segments of pregnancy, called trimesters

NUTRIENT REQUIREMENT FOR PREGNANT

CALCIUM

Helps to build strong bones and teeth. Main sources include milk, cheese, yogurt, and sardines. During pregnancy you need 1,000 milligrams (mg) daily.

Iron

Helps red blood cells deliver oxygen to your baby. Sources include lean red meat, dried beans, peas, and iron-fortified cereals. During pregnancy you need 27 mg daily.

VITAMIN A

You need this vitamin for healthy skin, eyesight, and bone growth. Carrots, dark, leafy greens, and sweet potatoes are good sources. During pregnancy you need 770 micrograms daily.

VITAMIN C

Promotes healthy gums, teeth, and bones, and helps your body absorb iron. Good sources include citrus fruit, broccoli, tomatoes, and strawberries. During pregnancy you need 85 mg daily.

VITAMIN D

Aids your body in the absorption of calcium to help build your baby's bones and teeth. Sources include exposure to sunlight, fortified milk, and fatty fish, such as salmon. During pregnancy you need 600 international units (IUs) daily.

VITAMIN B6

Helps form red blood cells and helps your body use protein, fat, and carbohydrates. You can find vitamin B6 in beef, liver, pork, whole-grain cereals, and bananas. During pregnancy you need 1.9 mg daily.

VITAMIN B12

Helps form red blood cells and maintains your nervous system. You can find this vitamin only in animal products. Good sources include liver, meat, fish, poultry, and milk. During pregnancy you need 2.6 micrograms daily.

Folate (Folic Acid)

A B vitamin important in the production of blood and protein, it also reduces the risk of neural tube defects (a birth defect of the brain and spinal cord). You can find folate in green, leafy vegetables, liver, orange juice, legumes (beans, peas, lentils), and nuts.

You must get at least 400 micrograms of folate daily before pregnancy and during the first 12 weeks of pregnancy to reduce the risk of neural tube defects. During pregnancy, doctors recommend you get 600 micrograms daily.

NURSING MOTHER.

It shall be the employee's responsibility to notify the principal of the need to express milk during the workday. The employee, school nurse, and principal shall meet and make arrangements that include the following: a designated location, an agreed upon number of expression times per day and the length of time per expression. The designated location shall be a room or location that is within the school building and will provide the employee with privacy and sanitary conditions.

NURSING SERVICES

means the provision of individual-specific advice, plans, or interventions by a nurse at a home based on the nursing process as outlined by the Oregon State Board of Nursing. Nursing services differ from administrative nursing services.

NURSING MOTHER

In poor Indians communities the nursing mother takes only rice supplemented with little pulse and vegetables. Milk is used in tea or coffee. In india it is the custom to breast feed infants for prolonged periods nanging from six months up to even three years without giving sufficient weaning foods.

Studies conducted by NIN have indicated that women from low income groups do not have adequate Weight gain during pregnancy with probably low fat mass acural start locatins without

Adequate energy reserves. They breast feed their energy stress during lactations leads to maternal tissues depletion.

It is fortunate that despite a faculty and insufficient maternal diet the quality of breast milk does not suffer. On the other hand, it comprass well with that of nursing mother consuming excellent diets in other parts of the world .pershs the Indian nursing mother keeps up the quality by withdrawing nutrients from her own bone, blood and muscle for the formation of milk since her inadequate diet is incabable of providing the nutrients requires for satisfactory milk production

OLDER WOMEN WITH SPECIAL FOCUS

PROTIEN

Adequate protein intake is essential for the maintenance of whole-body protein mass. Different methodological approaches are used to substantiate the evidence for the current protein recommendations, and it is continuously debated whether older adults require more protein to counteract the age-dependent loss of muscle mass, sarcopenia. Thus, the purpose of this critical narrative review is to outline and discuss differences in the approaches and methodologies assessing the protein requirements and, hence, resulting in controversies in current protein recommendations for healthy older adults. Through a literature search, this narrative review first summarizes the historical development of the Food and Agriculture Organization/World Health Organization/United Nations University setting of protein requirements and recommendations for healthy older adults. Hereafter, we describe the various types of studies (epidemiological studies and protein turnover kinetic measurements) and applied methodological approaches founding the basis and the different recommendations with focus on healthy older adults. Finally, we discuss important factors to be considered in future studies to obtain evidence for international agreement on protein requirements and recommendations for healthy older adults. We conclude by proposing future directions to determine ‘true’ protein requirements and recommendations for healthy older adults.

IRON

requirements for iron for women change after menopause; the need for iron to replace menstrual losses ceases, and tissue stores are generally adequate if dietary intake is at acceptable levels. Needs for iron in older

women revert to the same levels as those for adult males: 10 mg/d. Dietary iron bioavailability may be affected by the consumption of heme iron, supplemental iron, dietary ascorbic acid, and alcohol

VITAMIN D

It is well recognized that older women are at risk for inadequate vitamin D consumption. Vitamin D has significant roles in bone health by regulating bone mass, but it also is an essential nutrient in immune function There are 2 primary sources of vitamin D: diet and skin. Dietary sources of vitamin D are fatty fishes and fortified dairy products. Consumption of fortified dairy products is very variable among older women, especially because lactose intolerance is more prevalent in older adults. There has been some speculation that even in people who are including fortified foods in their diet, the foods are under fortified

VITAMIN C

Vitamin C status is generally related to dietary intake; presently, requirements for older adults are higher than the 1989 RDAs. Newer data set the recommendations for vitamin C at 90 mg/d for males and 75 mg/d for females over age 50 . Reductions in vitamin C intake are associated with illness, hospitalization, and institutionalization. Lowered intake often is associated with chronic disease including atherosclerosis, cancer, senile cataracts, lung diseases, cognitive decline, and organ degenerative diseases .

Vitamin C is relatively easy to replenish by consuming fruits, fruit juice, and vegetables, or through vitamin supplementation. Elderly individuals who smoke may require double the recommended intake just to maintain tissue levels. As a key nutrient, it is important to consume adequate amounts, particularly in old adults. The role of vitamin C is that of an antioxidant; as a metabolic reducing agent; as a catalyst needed for hydroxylation for proline and lysine, needed for collagen production essential to make new tissue and heal wounds; and, for the maintenance of vascular integrity.

Tissue saturation of vitamin C is achieved easily ; excess dietary vitamin C will be excreted in the urine. Chronic large doses may contribute to diarrhea or renal calculi formation and should be discouraged among elderly persons.

FOLIC ACID

Folic acid is used for preventing and treating low blood levels of folate (folate deficiency) and high blood levels of homocysteine (hyperhomocysteinemia). People who are pregnant or might become pregnant take folic acid to prevent serious birth defects such as spina bifida. Folic acid is also used for many other conditions including depression, stroke, decline in memory and thinking skills, and many others.

CALCIUM

Calcium is an essential nutrient that many older women consume in inadequate amounts. Despite this, the endocrine system serves to maintain serum calcium within a fairly narrow range by managing absorption, bone mineral balance, and calcium excretion in urine . For older women, the dynamics of calcium requirements

change. Presently the DRI for calcium for adult women is 1200 mg calcium/d but there have been suggestions that a daily intake of 1500 mg/d for postmenopausal or over 65-year-old women would be appropriate . The challenge is that when the RDA was 1000 mg/d there were a significant number of women who consumed diets with inadequate levels of calcium; changing the requirement does not necessarily alter eating patterns and it is apparent that supplemental calcium is needed from nondietary sources.

Consequences of eating disorder in young women

EATING DISORDER

Eating disorders, especially anorexia nervosa and bulimia nervosa have been classically described in young females in Western population. Recent research shows that they are also seen in developing countries including India. The classification of eating disorders has been expanded to include recently described conditions like binge eating disorder. Eating disorders have a multifactorial etiology. Genetic factor appear to play a major role. Recent advances in neurobiology have improved our understanding of these conditions and may possibly help us develop more effective treatments in future. Premorbid personality appears to play an important role, with differential predisposition for individual disorders.

ANOREXIA NERVOSA

Numerous criteria have been proposed for the diagnosis of anorexia nervosa. Most of the criteria share the following essential features:

- Weight loss/lack of weight gain and behaviors that are designed to produce such weight loss
- A psychopathology characterized by the relentless drive for thinness and/or a morbid fear of fatness. The essential psychopathology seems tightly linked to overvalued beliefs, primarily the overvaluation of thinness. The drive for thinness as a psychopathological motif has been emphasized more by Americans, beginning with Hilde Bruch, whereas the morbid fear of fatness, the phobic avoidance of normal weight, has been emphasized more by the British
- The medical consequences of starvation: For example endocrine dysfunction manifested as amenorrhea in women and loss of sexual potency in men, hypothermia, bradycardia, orthostasis and severely reduced body fat stores, etc
- Anorexia nervosa is often, but not always, associated with disturbances of body image, the perception that one is distressingly large despite obvious medical starvation. The distortion of body image is disturbing when present, but not pathognomonic, invariable, or required for diagnosis.

BULIMIA NERVOSA

- There are recurrent episodes of overeating (at least twice a week over a period of 3-month) in which large amounts of food are consumed in short periods

- There is a persistent preoccupation with eating and strong desire or a sense of compulsion to eat (craving)
- The patient attempts to counteract the "fattening" effects of food by one or more of the following:
    - Self-induced vomiting
    - Self-induced purging
    - Alternating periods of starvation
    - Use of drugs such as appetite suppressants, thyroid preparations, or diuretics; when bulimia occurs in diabetic patients, they may choose to neglect their insulin treatment.
- There is self-perception of being too fat, with an intrusive dread of fatness (usually leading to underweight).

- Patients with bulimia nervosa have a powerful and intractable urge to overeat and have a feeling of lack of control over the episodes of binge eating. There are controversies as regard to the criteria for what constitutes a binge. Some focus on the quantity of food taken, some on the subjective state of the person and others on the rapid rate of eating. The DSM-IV gives the criterion "eating, in a discrete period of time (e.g., within a 2-h period), an amount larger than most people would eat during a similar period and similar circumstances" and a sense of lack of control. The clinical features of bulimia nervosa are similar to that of binge eating/purging type of anorexia nervosa. These disorders can be differentiated by the presence of large amount of weight loss seen in patients of anorexia nervosa.