



# **NUTRITION THROUGH THE LIFE COURSE: PART 8 - THE ELDERLY**

**A**ging is an inevitable natural process. It results in changes to several organs which function less efficiently leading to the development of disease. Research has shown that the risk of chronic disorders increases significantly with age.

Good nutrition can slow the disease process, and assist the individual to have a longer life. It is very important that elderly persons engage in good nutrition practices by eating a variety of foods from the six food groups and being physically active to delay or prevent the onset of diseases. However if dietary measures alone are not sufficient to meet nutrient requirements as a result of changes in eating habits, the use of supplements must be considered.

## **Factors Affecting Food Intake**

Several factors affect the food intake of elderly persons. As people age, their ability to taste and smell foods decreases which affects their enjoyment of food and reduces their appetite. Dental problems such as ill-fitting dentures and tooth loss make chewing difficult and limit the selection of certain foods such as fruits and fresh vegetables.

Older persons can have a poor nutritional status as a result of an inadequate food intake due to loss of a spouse, depression, inability to go out shopping due to decreased mobility, physical problems with eating such as being unable to hold utensils and dental and oral problems. For some elderly individuals, availability of food,

cooking ability, cooking facilities, living conditions and income level also limit the amount and choice of foods that they consume which severely affects their nutrient intake. These factors make them very vulnerable to malnutrition. Acute or chronic illness and disabilities can also affect nutrient intake. Some drugs which are commonly used in the elderly may also lead to mineral and vitamin depletion, loss of appetite, depression, altered taste sensations, diarrhoea and vomiting which can lead to severe loss of weight.

## **Meeting Nutritional Needs**

### **Calcium and Vitamin D**

The elderly require calcium and vitamin D which are

supplementation as part of the management of sickle cell anaemia. Studies show that there is increased height, weight, immune system function, and testosterone levels and decreased numbers of crises and sickled cells in patients who undergo zinc treatment.

Studies have shown that zinc utilised topically along with antibiotic treatment can greatly improve the condition of the skin and clear up signs of acne. Oral zinc treatment has also been found useful in treating acne.

Preliminary research suggests that zinc supplementation can increase the ratio of good cholesterol to bad cholesterol, may significantly reduce plaque build up and incidence of gingivitis when used in tooth-paste preparations and may even be an effective inclusion in the treatment of Herpes Type I and Herpes Type II infections. There is also encouraging research on the use of zinc in treatment of Attention Deficit Hyperactivity Disorder (ADHD). However, more research is needed in these areas.

### Zinc Deficiency

The most common cause of zinc deficiency is inadequate intake of absorbable zinc from the diet. This may be due to consumption of foods which are mainly poor sources of zinc, or intake of foods which contain a high concentration of phytates. In areas of poor development or low economic status, zinc deficiency, if present, is usually as a result of inadequate intake of bio-available zinc, poor breast-

feeding practices or the presence of diseases which either cause excessive loss of zinc or impairment of zinc utilisation. Periods of rapid growth or pregnancy when zinc requirement is increased may also increase a person's risk of becoming deficient.

General symptoms of zinc deficiency include alopecia (hair loss), slow wound healing, skin lesions, immune deficiencies, impaired appetite, eye lesions, night blindness, behavioural disturbances and impaired taste. In children, zinc deficiency can lead to growth retardation, delayed sexual maturation, hypogonadism (decreased function of the ovaries and testes) and mild anaemia.

Because zinc deficiency will cause increased vulnerability to a variety of diseases and infections, this can be especially dangerous in children, as many diarrhoeal diseases and infections which are contracted during infancy may prove fatal without immediate care. A recently concluded research series on maternal and child undernutrition concluded that zinc deficiency is responsible for approximately 4% of child mortality. Many community based zinc supplementation interventions have shown that zinc supplementation reduces the occurrence of diarrhoeal diseases and pneumonia in young children. Supplementation during diarrhoea reduces the severity and the length of the illness. It is now recommended by the WHO and UNICEF that zinc supplementation be included as part of the standard

treatment for diarrhoea. Several clinical trials have shown that children who received preventative zinc supplementation showed a 9% reduction in mortality.

### Food Sources of Zinc

In general, zinc intake correlates well with protein intake, meaning that many foods high in zinc are also high in protein. The majority of most people's intake of zinc comes from meat, fish and poultry. Other good sources are oysters and other shellfish, liver, dry beans and nuts. Soy products are considered a fairly good source. Although cow's milk contains relatively good quantities, the calcium from the milk may interfere with absorption of zinc (and also iron). Zinc is also better absorbed from human milk (breastmilk) than from cow's milk. Many modern processed cereals are fortified with zinc in addition to other minerals and so are also good sources of the micro-mineral. The following table shows the range of zinc content in some foods.

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"It finally happened. The school hired a nutritionist and I really did flunk lunch."

snacks between the main meals. To sustain a good nutritional status, elderly people should eat a variety of nutrient dense foods and maintain an active lifestyle. Meals should be enriched by adding low fat milk or cheese to increase nutrient content. They should eat more fresh fruit and vegetables, whole grain and unprocessed foods.

For those whose intakes are affected by psychological factors such as depression, fatigue and anxiety, they should consult with a specialist for help in dealing with these problems.

### **OVERWEIGHT/EXCESS WEIGHT GAIN**

As people get older, energy requirements decrease as a result of their reduced physical activity and decreased energy needs for sustaining body functions such as respiration and circulation. However some old people may consume the same amount of food as when they were younger leading to weight gain. Being overweight can impair the ability to move about efficiently and increases the risk of falls. Obesity is associated with several chronic diseases such as diabetes, hypertension, arthritis and atherosclerosis.

Elderly should eat small portions often instead of three large meals. Healthy nutritious snacks between meals are encouraged such as fruits, milk (low fat) and plain biscuits or crackers. Foods that are rich in sugar should be reduced as these foods add calories which lead to excess body weight. Fats are higher in calories than proteins and carbohydrates

and must be reduced in the diet so as to reduce calorie intake. Elderly people should always choose lean cuts of meat and remove excess visible fat whenever possible. They should use oils high in polyunsaturated fats and low in saturated fats such as corn, soybean and cottonseed oil instead of lard, butter or margarine.

Exercise should be a part of the daily activities for maintenance of good health and weight control. At least thirty minutes of physical activity of moderate intensity should be carried out daily and this can be divided into ten minutes sessions. Moderate intensity activities include walking, climbing stairs, gardening and house cleaning. Physical activity helps in the control of blood pressure and blood glucose and cholesterol levels. It also strengthens bones and increases lean body mass.

### **DIABETES**

Diabetes is one of the most common diseases of older persons in the Caribbean and is associated with obesity and lack of physical activity. It is more prevalent in women than in men. Diabetes is characterised by a higher than normal blood sugar level in the body. The common symptoms of diabetes are frequent urination, increased hunger and thirst, blurred vision, weakness and poor healing of cuts.

Exercise and proper meal planning are important for controlling the blood sugar. Weight loss has been found to be beneficial in controlling blood glucose levels.

These general guidelines are recommended:

- Eat a variety of foods from the six food groups and include fresh fruits and vegetables.
- Foods with simple sugars such as honey, molasses, sugar, soft drinks and syrup should be used sparingly in favour of foods with complex carbohydrate such as legumes (peas and beans), whole grain cereal (oats, wheat, corn, and barley), and starchy roots/tubers (breadfruit, dasheen, yam and sweet potato). The latter foods are slowly digested in the body and take a longer time for the glucose to reach the blood stream.
- The intake of fats and oils should be reduced to decrease the risk of obesity and cardiovascular disease. Fatty foods high in saturated fats and cholesterol should be used sparingly. Lean cuts of meat, fish and low fat dairy products should be used instead. Roast, broil, grill, bake or steam foods rather than frying them.
- Regular aerobic activity for 30 minutes for at least 5 times weekly is recommended. Exercise helps to improve cardiovascular fitness and insulin sensitivity and to decrease blood glucose levels.
- Persons with diabetes should monitor their blood glucose on a daily or weekly basis as part of self-management and for more effective control of blood glucose.