

ELDERLY

- **Who is an elderly person?**

Elderly constitute of all the Individuals of 60 years and above (W.H.O).

- **How are the elderly different?**

Ageing affects almost all the systems of the body, and is associated with several physiological, metabolic and psychological changes. The changes include;

- Decline in physical activity, metabolism, bone mass and muscle mass. Failing eye-sight and impaired hearing may also occur.
- The ability to digest and absorb food also decreases.
- Elderly people also complain of a feeling of heaviness and fullness in the stomach, gas formation and acidity.

- **What are the causes for decreased dietary intake in elderly?**

Decrease of food intake and poor absorption of nutrients could be due to:

- Low appetite as a result of loss of taste and smell perception, dental problems, atrophic changes in GIT, constipation and decreased physical activity.
- Inability to prepare food, economic dependency and other psycho-social problems.

- **How does decreased nutritional intake affect the health of the elderly?**

Decreased nutritional intake adversely affects the health and nutritional status of the elderly.

- There is a decline in immune function with advancing age, which leads to decreased resistance to infectious diseases.
- The increased parathyroid hormone (PTH) secretion in the elderly leads to increased bone turn over i.e. osteoporosis.
- Elderly individuals are at increased risk of osteomalacia i.e. defective bone mineralisation due to lack of exposure to sunlight and poor diet.

- **Why are the nutritional needs of elderly different from adults?**

The nutritional needs of the elderly are very different from those of young adults.

- **Slow Body Metabolic Rate:** Metabolic rate slows down and the activity levels decreases. Therefore, the elderly require less energy and correspondingly smaller quantities of food. However, even though the elderly need less energy, they need the same amount of or even more of vitamins and minerals than they needed as adults.
- **Pleasure of eating diminishes:** This occurs because of a decrease in the sensitivity of the taste buds. The taste of food appears bland. Older persons often tend to add additional salt or sugar to their food as they are not able to perceive tastes like sweet or salty as well as younger persons.
- **Chronic diseases:** As people age, there also tends to be an increase in the presence and number of chronic conditions such as hypertension, heart disease, diabetes, cancer, osteoporosis and dementia. These further compromise the quality of life in old age.

- **How can the elderly lead an active life?**

Exercise is an integral part of maintaining healthy life. It helps to regulate body weight. The risk of degenerative diseases is considerably decreased by regular exercise. Exercise schedule should be decided in consultation with a physician.

In general, majority of the health problems among the elderly are nutrition related. Consumption of nutritious foods rich in micronutrients including antioxidant vitamins & minerals and fibre, comfortable level of physical activity will enable the elderly to live active and meaningful healthy lives, without being a burden on society and their family members.

- **What are the common diseases among the elderly?**

Resistance to disease declines in the elderly. The common ailments in the elderly are:

- Degenerative diseases such as arthritis (joint diseases), osteoporosis, osteomalacia, cataract, diabetes, cardiovascular (stroke, heart diseases) problems, neurological (Parkinson's, Alzheimer's) and psychiatric (dementia, depression, delirium) disorders and cancer.
- Respiratory, gastrointestinal tract (GIT) and urinary tract infections.

- **What are the Dietary guidelines for lifestyle modification in elderly?**

The dietary guidelines for lifestyle modification in elderly are:

- Calorie should be sufficient to maintain appropriate body weight for a given height.
- Carbohydrate should constitute 55-75% of calories with emphasis on complex carbohydrate.
- Protein should provide 10-15% of total calories (1gm/Kgwt).
- Total fat should constitute for 15-35% of total calories.
- Cholesterol should not exceed 300mg/day in diet.
- Saturated fats should be less than 10% of the total calories.
- PUFA should not exceed more than 8% of the total calories.
- MUFA is a recommendation (15% of total calories).
- PUFA/Saturated fats ratio should be 0.8-1.0.
- Trans fatty acids should be avoided.
- LA/ALA should be 5-10.
- Sugars should be less than 10% of the total calories and kept to minimum.
- Salt intake: 5-7 gm./day.
- 1.5 to 2 litres of water should be consumed per day.
- Variety of foods should be consumed.

- **What are the dietary guidelines (food group based) for elderly?**

Food based guidelines for elderly are:

- Variety of whole grains, millets and pulses should be included in the daily diet.
- Two glasses of low fat milk and equivalent milk products should be included.
- 4-5 servings of fruits and vegetables (all colours); 1 serving=1 bowl = 125gm.

- Encourage intake of salad.
 - 15-20 gm. of healthy oil is recommended. Changing oils between sunflower, safflower, groundnut, olive, canola, and soybean is recommended.
 - For non-vegetarians lean chicken, fish and egg whites are healthy options.
- **What are the Behaviour guidelines/ meal pattern for the elderly?**
 - Small frequent meals at regular intervals. Gaps should not be less than 2-3 hrs.
 - Do not skip breakfast.
 - Have an early dinner.
 - Choose healthy snack options.
 - Boiled/steamed/roasted/grilled cooking methods should be preferred over frying.
- **What is the Food based guidelines for the elderly?**
 - Consume a wide variety of foods across all food groups and a wide selection within each of these groups.
 - Consume nutrient dense foods like fruits, vegetables, whole grain cereals and pulses, low fat milk and dairy products, nuts soybean products.
 - Emphasize healthy traditional dishes like dal, vegetable raita and missi roti.
 - Encourage consumption of available protective foods (fish, nuts, garlic, onion, leafy vegetables, tomatoes, soy, fruits)
 - Limit traditional dishes/foods like sweet, cream pastries, pickles, fried food.
 - Consume MUFA and PUFA dietary visible fats obtained from mustard, rice bran, soybean, safflower, sunflower, groundnut and til.
 - Limit spreads containing saturated fat and Trans fat. Minimise or combine foods containing hidden animal fats.
 - Limit visible oil consumption to about 20gm. /day.
 - Added oils may assist in the absorption of fat soluble nutrients and phytochemicals from plants foods.
 - Consume fats for cooking which have been minimally processed (cold press or extra virgin).
- **How should elderly ensure consumption of safe foods?**

Safe and good quality food is essential for maintaining good health. Elderly are more vulnerable to infections because their immune system has been weakened by many age related factors. Consumption of unsafe food can lead to food borne infections.

Most infections that arise out of poor food hygiene and safety practices are associated with diarrhoea and vomiting. These reduce the food intake and affect the nutritional status of the affected person adversely. Therefore, it is important to prevent food borne infections in old age people.

Food can be a source of infection if it is not handled, prepared or stored properly. Proper handling of food and water is very important to avoid infections caused by bacteria and viruses in contaminated food and water.
- **What should be the criteria for food selection and purchase for elderly?**

Some Do's and Dont's to be kept in mind:

- Do buy seasonal and locally available foods.
- Do purchase food items from a reliable source.
- Do buy packaged food with proper labels.
- Do look for quality marks like AGMARK (agricultural product) and FPO (fruit products) on the label.
- Do not buy items like ground spices, *dals*, wheat flour and sugar loose.
- Do not buy stale or spoilt foods, particularly animal foods like mutton, fish, eggs etc.
- Do not buy or use cracked eggs.
- Do not taste food which is suspected to be spoilt as the consumption of even a small amount of the food may make you ill.

- **What should be the consideration for the preparation and consumption of foods for adults?**

Food prepared or eaten in unhygienic conditions gets contaminated and cause infection. Common food borne infections include diarrhoea, typhoid and infective hepatitis. Since the immune system of elderly is already weak they are more prone to infections. Care should be taken to prepare and serve food hygienically.

Some Do's and Dont's to be kept in mind:

- Do wash hands with soap and clean water before, during and after cooking food and before and after eating food.
- Do keep nails short and clean.
- Do cover all wounds to prevent contamination of food during cooking and handling.
- Do use clean utensils to cook and serve food.
- Do wash all raw vegetables and fruits with boiled clean water before eating and cooking them.
- Do remove the discoloured, over ripe parts of fruits and vegetables.
- Do eat freshly prepared homemade food.
- Do cook all animal foods thoroughly.
- Do protect kitchen area and food from insects, flies, rats and other animals.
- Do not cut vegetables before washing.
- Do not eat food which is kept uncovered or stored in unhygienic conditions.
- Do not consume food from roadside vendors.
- Do not consume raw eggs and foods containing raw eggs.
- Do not eat rotten fruits and vegetables.
- Do not overcook food while frying.
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- **What diet modifications should be made if the person is suffering from constipation?**

Constipation or the irregular, infrequent or difficult passage of stools is one of the common problems faced by elderly. Generally, it is uncomfortable and elimination of stools becomes difficult and painful.

Common symptoms of constipation include: bloating, sluggishness and a feeling of fullness.

Constipation could be due to reduced physical activity, insufficient fluid consumption,

low fibre intake, psychological factors and long term use of medications like laxatives.

To relieve constipation:

- Increase fibre intake. Fibre softens the stool and makes them easier to pass. High fibre food like whole cereals and whole pulses, fruits and vegetables like green leafy vegetables, beans, drumsticks, peas, carrots, apples, guavas etc. should be eaten in greater amounts.
- Drink plenty of fluids like water, juice, clear soup, *lassi* etc as it helps to soften the stools. An intake of 8-10 glasses of water or fluids in a day is desirable.
- A glass of hot water with lemon juice taken early in morning also helps to ease constipation.
- In case of chronic constipation laxatives like *isabgol* and *agar agar* may be helpful. This is because when mixed in water they swell up and increase stool volume.
- Do not consume liquid paraffin or castor oil because they interfere seriously with the absorption of fat soluble vitamins like vitamin A and K.
- Do some regular physical activity or exercise to prevent constipation.

● **How should acute diarrhoea be managed?**

Diarrhoea is characterized by sudden onset and frequent passage of watery and unformed stools, often 3 or more in a day. It may last for only a few days. Other symptoms may include abdominal pain, cramps, weakness and sometimes fever and vomiting.

Causes of diarrhoea may be infections caused by unhygienic food and water, even ear infections, consumption of certain medications, food allergies and deficiencies of B vitamins. Psychological stress, tension or anxiety may also cause bouts of diarrhoea.

In older persons, acute diarrhoea may lead to dehydration because of the excessive loss of water and electrolytes. Therefore, replacement of water and electrolytes assumes major importance and providing adequate food becomes secondary.

- Prevent dehydration by giving oral rehydration therapy (ORT). ORT involves giving fluid by mouth to prevent the dehydration. ORT should be started as soon as the elderly passes even one loose stool.
- Oral rehydration solution (ORS) packets are easily available in health centres and pharmacies. It can be prepared easily by dissolving the contents in a specified amount of clean boiled water. ORS can also be prepared at home by dissolving a pinch of salt and one tablespoon of sugar in one glass of clean and boiled water. The ORS salt sugar solution should be given as frequently as possible. Other fluids which may be given along with ORS are lemonade, coconut water, *dal* water, rice water, whey water, clear soups, strained fruit juices, weak black tea etc.
- Initially milk may not be tolerated. As the condition improves, milk and other soft foods can be introduced.
- The diet in diarrhoea should include easily digestible food. A soft diet low in fibre, residue and fat is recommended. Well cooked, easy to digest, soft and semisolid food like *khichri* and curd, rice and washed *dals*, idli, bread may be included.

- Foods like whole cereals and pulses, raw fruits and vegetables rich in fibre, fried foods, milk and milk based beverages, should be restricted or used in limited amounts. However, refined cereals, washed pulses, well-cooked low fibre vegetables like potatoes, bottle gourd, fruits with low fibre content such as banana, and milk product like curd can be consumed to meet the nutritional needs.
- Small, frequent meals are suitable as the elderly may not be able to very large meals. Care should be taken to provide small meals, snacks or beverages every 2-3 hours initially.

- **What diet pattern should be followed for person complaining of flatulence?**

A person with flatulence feels the urge to pass wind repeatedly which maybe noisy and foul smelling, or noiseless and odourless. Flatulence is caused due to the inability to digest all the food that is consumed by the person. Since elderly may have weak digestive systems, they may experience this more often.

People also swallow air when they eat or drink something e.g. while drinking hurriedly or with a straw. Some foods also produce more gas on digestion e.g. whole *dals* and beans like *rajmah*, soybean etc. Many persons may also experience gas formation on drinking milk as they maybe lactose intolerant. Consumption of certain medications like antibiotics may also produce gas. Flatulence may also be a symptom of digestive disorders such as fat malabsorption, gastroenteritis, irritable bowel syndrome or constipation.

- Chew food properly while eating because hurried eating also involves ingestion of air. Faulty, ill-fitting dentures make chewing difficult.
- Avoid foods associated with gas formation like beans, pulses, whole cereals, milk products, fried and fatty foods. The problem foods may vary from individual to individual.
- Avoid drinking from straw or gulping liquid beverages fast. These are accompanied by ingestion of large quantities of air and result in burping and flatulence. Take small sips of the beverage, drinking slowly.
- Avoid or restrict consumption of aerated drinks.
- Take 4-6 small frequent meals in a day rather than 3 large meals.
- After a heavy meal, take a walk or move around rather than immediately lying down.
- Home remedies for dealing with flatulence:
 - Chew fresh ginger slices that are soaked in lime juice after meals
 - Drink a concoction of 1/2 tsp of dry ginger powder with a pinch of asafoetida and a pinch of rock salt in a cup of warm water
 - Chew peppermint after a meal. Peppermint contains menthol that soothes the digestive muscles. It helps in treating flatulence, bloating and abdominal pain that accompanies gas.

- **What is the dietary management for the person suffering with fever?**

Fever is a rise in the body temperature above normal (98.4°F or 37°C). Fever is not an illness but a symptom of a disease, usually an infection. Therefore, it is important to find out the cause of the fever. Acute fevers, like those due to infections like cough, cold, ear infection, urinary tract infections, pneumonia, typhoid, malaria are of short duration but the body temperature may rise to above 104° F. Chronic fevers are of longer duration,

even for several months e.g. tuberculosis. They have slow and gradual onset and are low in severity.

With the rise in body temperature above normal (98.4° F or 37°C), certain changes occur in the body such as increased rate of metabolism, breakdown of fat stores and muscle tissues, loss of weight and weakness.

Excessive loss of fluids due to sweating may also occur. With the high temperature and weakness, the patient loses his appetite. Therefore extra efforts are needed to provide adequate nourishment.

- Increase energy density of food. This can be done by adding butter, *ghee*, honey, sugar to foods such as *khichri*, *dal*, soups, juices, milk etc. Use only easily digested and absorbed forms of fat like cream, butter, whole milk, egg yolk.
- Avoid fried foods and rich fatty foods as they may cause diarrhoea.
- Consume liberally protein rich foods such as milk, egg and pulses as they prevent muscle wasting.
- Prefer cereal pulse combinations like *khichri*, *paushtik roti*, sweet *dalia* with milk etc as they provide better quality protein and promote recovery.
- Give small meals at frequent intervals of 2 – 3 hours to increase nutrient intake. As the condition improves, larger meals may be given.
- Consume adequate amounts of fluids such as soups, juices, weak tea, and milk to prevent dehydration.
- Make meals simple and attractive to encourage the patient to eat.
- During the acute stages of illness when fever is high, a high protein, high energy full fluid diet is given i.e. all the foods should be liquid at room temperature to make digestion easy. Therefore, provide well-cooked blenderized *khichri*, thick soups, cereal pulse gruels, custard etc.
- As the condition improves, give a bland, low fibre, soft diet to facilitate digestion and rapid absorption. The food should be soft or of regular consistency. Avoid foods with high fibre content like whole grain cereals, whole pulses, raw fruits and vegetables.
- Restrict spices and other strongly flavoured foods. Give well, cooked, well mashed, sieved, bland, semisolid foods like *khichri*, rice with curd, *kheer*, banana, potatoes etc.

- **How should obesity be managed with diet therapy?**

Obesity is basically deposition of extra body fat which leads to excess body weight. It occurs as elderly, particularly women, fail to make adjustments in their energy intake for their reduced body needs and inactive routine. Obesity is associated with several health problems such as diabetes, cardiovascular diseases, arthritis, gout, etc and may reduce life span of the individual. Hence, maintaining weight within normal range helps to keep one healthy and active.

Some dietary considerations to reduce weight are following:

- • Limit the intake of fried, fatty foods e.g. *ghee*, butter, *namkeens*, *mathris*, chips etc.
- Substitute skimmed milk for whole milk.
- Avoid foods with excess sugar e.g. chocolates, sweets, mithai, carbonated beverages, jam, jellies etc.

- Include more fibre rich fruits and vegetables in the diet. Eat plenty of green leafy vegetables, peas, beans etc.
- Reduce the consumption of refined cereal foods e.g. rice, refined flour, bread etc.
- Do some form of physical activity. Walking is an excellent exercise.

- **How should chronic energy deficiency/ undernutrition be treated?**

In old age, reasons for undernutrition include decreased food intake, dependency on help for eating, impaired cognition and/ or communication, frequent acute illnesses which leads impaired absorption, medications that decrease appetite or increase nutrient losses, psychosocial factors such as depression and isolation. This puts the elderly at risk of developing other nutrient deficiencies also like anemia, vitamin C and calcium deficiencies.

If the elderly is suffering from unaccounted loss of weight, weakness and increasing frailty, he/she should:

- Gradually increase intake of food in terms of both quality and quantity.
- Consume liberally cereals, starchy fruits and vegetables like potatoes, bananas, mangoes etc,
- Add sugar, honey, jam, butter, cream to food preparations.
- Include easily digestible protein foods like milk, eggs, cereal and pulse combinations like *idli*, *missi roti* in the diet.
- Include plenty of vegetables (green leafy), fruits, cereals and pulses (particularly in sprouted form) to ensure adequate intake of vitamins and minerals.
- Eat vitamin rich fruits like guava, oranges, lemon, amla etc as they helps in building immunity.
- Limit the consumption of tea, coffee and cold drinks particularly after meals to prevent anemia.
- Consume small frequent meals to increase the food intake.

Nutrient dense meals should be given to the person, which may include:

- Vegetable khichri with butter and curd
- Vegetable sandwich with honey
- Milkshakes with cream
- Vegetable soup with cream/butter
- Vegetable omelette and bread with honey/butter
- Vegetable uttapam with butter
- Vegetable poha with curd
- Milk /juices with skim milk powder and sugar
- Eat a variety of foods which are well prepared and attractively served as they promote the desire to eat.
- Include favourite foods and snacks served in between meals as they increase interest in eating and increase nutrient intake.

- **What is dietary management for elderly in diabetes mellitus?**

Diabetes mellitus leads to an increase in blood sugar levels. This occurs due to deficiency of insulin in the body. Though there is no cure for diabetes, it can be

controlled by suitable dietary changes. If uncontrolled, it can lead to severe complications affecting eyes, blood vessels and kidneys. Weight control is the first step in the management of this disease. Other dietary considerations are:

- Avoid sweet foods like sugar, jaggery, *mithai*, chocolates etc.
- Restrict the use of starchy fruits and vegetables like banana, mango, *cheeku*, potato, *arbi* etc.
- Include high fibre foods like whole cereals, buckwheat (*kuttu*), *ragi*, green leafy vegetables, beans, whole pulses and legumes.
- Refined foods like *maida*, *suji*, arrowroot, sago, juices etc. should be avoided.
- Supplementation of cereal with gram flour is beneficial. Use three parts of whole wheat flour with one part of gram flour in making of *chapattis*; two parts rice with one part whole pulse to make idli, dosa, *khichri* and two parts of *suji* with one part of pulse to make upma.
- Eat plenty of fresh fruits and vegetables. Avoid fruit juices.
- Include foods with a low glycemic index e.g peas, *rajmah*, lentil, barley, *kuttu*, soyabean, apple etc. Preparations like roasted *channa*, *chapatti*, sprouted *dal* and whole fruits are more suitable than boiled rice, *khichri*, fruit juices etc.
- Use dry cooking methods like roasting rather than moist methods like boiling as they have a lower glycemic effect.
- Avoid/restrict alcohol

- **What should be the diet pattern followed for people with heart diseases?**

Heart disease occurs due to excessive deposition of fat in the arteries. This process occurs over a period of time and obesity is an important predisposing factor. Increase in the blood cholesterol levels is also a major factor associated with heart disease. Hence, dietary guidelines for prevention of heart disease and hypertension are directed towards reducing obesity as well as offering cardio protection. Major guidelines include:

Maintain a healthy body weight by adequate calorie intake and increased physical activity.

- Limit the total amount of fat in diet. Avoid fried, fatty foods.
- Avoid foods rich in saturated fat e.g. *ghee*, butter, milk fat.
- Use vegetable oils such as mustard oil, soyabean oil in limited amounts.
- Avoid preparations made in hydrogenated fat such as *namkeens*, *kachoris*, *mathris*, biscuits etc.
- Avoid animal foods such as eggs, organ meat (liver, kidney and brain), fatty meat (mutton, pork and their products) as well as whole milk, ice cream, butter, cheese, *khoa* etc as they contain high amount of cholesterol.
- Consume fruits, vegetables, cereals, pulses, egg white, low fat fishes, poultry and skim milk as they are very low in cholesterol.
- Limit consumption of foods high in sugar such as sweets, *burfis*, laddos etc because of their high energy content.
- Restrict the amount of salt in food. Table salt should not be added to foods.
- Avoid foods like chips, *namkeens*, pickles, sauces etc as they have high salt content.
- Restrict/avoid consumption of alcohol.

- **What diet should be given to people suffering from hypertension?**

Hypertension is defined as increase in blood pressure above normal. It involves many organs and systems including the heart, kidney and nervous system and may damage these if not controlled. It has been associated with increased risk of developing heart disease.

Hypertension is associated with excessive fat and salt intake. It is also related to obesity and diabetes. Psychological stress is another reason for increasing blood pressure levels.

Major dietary guidelines are following:

Maintain a healthful Body weight by increasing physical activity and adequate calorie intake.

- Restrict the consumption of saturated fat e.g. *ghee*, butter, milk fat etc.
- Use vegetable oils like mustard oil, sunflower oil, soyabean oil etc. in limited amounts for cooking food. The traditional practice of using a combination of 2-3 oils in food preparation provides the ideal mix of fatty acids.
- Avoid food preparations made with hydrogenated fat or reheated oils such as some namkeens, biscuits, and samosas etc which are rich in Trans fats.
- Include foods rich in soluble fibre particularly whole pulses and whole cereals. These help to lower blood lipid levels.
- Restrict the intake of salt. Avoid adding salt while cooking food. Table salt should not be added to the food.
- Avoid salted and fried snacks like chips, samosas, pakoras, mathri etc. as they contain large amounts of fat and salt.
- Eat plenty of vegetables and fruits. These are rich in vitamins, minerals, phytochemicals and antioxidants.
- Avoid/restrict alcohol.

- **How should osteoporosis be managed?**

In osteoporosis, there is marked decrease in the bone mass, when bone demineralization takes place at a faster rate than bone mineralization. As a result bones become spongy, lighter and fragile leading to easy fractures, with long healing time. It is very common among women in the post – menopausal phase of life. Calcium and vitamin D protect against osteoporosis. High calcium intake during the early years contributes to greater bone strength. However, in old age, we can only try and minimize further bone loss. The dietary modifications include:-

- Include calcium rich foods like milk, milk products (curd, cheese, *paneer* etc), and green leafy vegetables in the daily diet.
- Include soyabean, flaxseeds etc as they are rich in phytoestrogens which helps in improving bone health, especially in post- menopausal women.
- Do regular exercises like walking as it helps in strengthening bone mass. Also undertake strength training exercises like lifting weights, two to three times a week.
- Expose yourself to sunlight every day. Regular exposure to sunlight everyday helps in the production of Vitamin D, thus increasing bone mass.
- Avoid cigarette smoking, tobacco and alcohol consumption.

- **What is the diet management for Alzheimer's disease?**

Alzheimer's disease is a degenerative brain disorder that results in irreversible memory loss and decline in brain function and personality. It has a devastating impact on the nutritional status of the elderly. As the disease progresses, the risk of malnutrition increases. Appetite and food intake fluctuate with emotional state and confusion level. Feeding skills decrease with cognitive and physical decline. Elderly may forget to eat or may forget that he already ate and consequently eat again. Weight loss is common and choking occurs if elderly forget how to eat food.

Major guidelines are as follows:-

- Offer meals at regular, consistent times each day.
- Provide calm surroundings at mealtimes. Minimize interruptions, loud noises and abrupt movements. Switch off TV or radio.
- If a person resists eating, involve him in another activity and return to eating later.
- Provide only one food at a time.
- Give regular meals with in between meal snacks.
- Serve food at the right temperature, e.g. not too hot or too cold.
- Provide balanced meals to prevent weight loss.
- Include liberal amounts of fruits, vegetables and herbs rich in antioxidants.
- Serve food in coloured plates and bowls that are in contrast in colour of food to reduce confusion in the mind of the patient.
- Use smaller spoons to control feeding amount and minimize the risk of choking.
- If patient is not able to feed himself, initiate tube feeding.

- **What diet should be given to a person with Parkinson's disease?**

Parkinson's disease is a neurodegenerative disease that affects voluntary movement. It is characterized by loss of brain cells that produce a chemical that helps in muscle activity. Constipation, difficulty in chewing and swallowing, dribbling and mental confusion contributes to the increased risk for malnutrition. Thus diet play an important role in management of the disease and dietary goals are mainly to promote absorption of anti-Parkinson's drugs and lessen feeding difficulties. Some dietary guidelines are:-

- Maintain desirable body weight.
- Minimize the protein intake in day time and provide rest of the protein after 5.00 pm (evening meals). Therefore limit intake of milk products, pulses and animal foods in the day time meals.
- Consume high fibre foods like fruits and vegetable and adequate fluid to prevent constipation.
- Eat food in a sitting posture with head tilted forward to avoid choking.
- Cut food into smaller pieces or prepare pureed meals.
- Avoid foods which are too hard, too dry or too sticky as it may cause choking. Encourage patients to chew and swallow slowly and do not hurry them.
- Use smaller spoons to control feeding amount and minimize the risk of choking.
- Use straws to control the amount and flow of fluids during drinking.
- Thus a little care and thought to the diet goes a long way in preventing or delaying the onset of such problems.

- **What Dietary Care should be given For Terminally Ill patients?**

Terminal illness is a medical term which describe a disease that cannot be cured or adequately treated and may result in the death of the patient. This term is commonly used for progressive diseases such as cancer or advanced heart disease. A person is considered to be terminally ill when he is expected to live for six months or less. Treatment is aimed at providing relief from the immediate symptom rather than to cure the disease.

The nutritional needs of critically ill elderly are very variable depending upon their clinical and nutritional status. Weight loss, decreased appetite, and difficulty in eating are common features of the terminally ill individual. Some may also become physically unable to take sufficient nutrition or eating may become painful, time-consuming, or otherwise burdensome. Most of such elderly may also experience psychological stress like depression, mood swings, denial, agitation etc. Changes in the diet may help in maintaining body weight, and quality of life, but they do not affect the clinical condition. Only the course of the disease may be slowed down.

- Diet restriction applicable in disease conditions like diabetes or heart disease may be relaxed in terminally ill elderly. However, this should be done under medical advice.
- Try and maintain the weight of the patient. Deterioration in the patient's condition is slower if he/she is well nourished.
- Provide sufficient energy to maintain body weight. Energy can be provided from fat (oil, butter) and carbohydrate sources like cereals, starchy vegetables (e.g. potato, sweet potato), sugar etc.
- Restrict the carbohydrate intake if the elderly is facing breathing problems. Excess carbohydrate intake may aggravate the breathing problem. In this situation, intake of butter, ghee and oil should be increased and correspondingly intake of sugar, starchy vegetables should be decreased.
- Include protein foods in the form of pulses, milk and milk products etc. according to individual tolerance and medical necessity.

- Protein restriction is often done in case of kidney or liver diseases.
- Include liberal amounts of fruits and vegetables as they are rich source of vitamins, minerals and phytochemicals. Medications often affect the absorption of vitamins and minerals. This may leads to their needs being increased.
- Vitamin and mineral supplements may be necessary, but should be given only under medical advice.
- Include calcium rich foods e.g. milk and milk products, green leafy vegetables, nuts and oil seeds etc as they have a beneficial effect on bone health. Long periods of confinement to bed may result in bone demineralization and weakening of bones.
- Motivate elderly to spend some time outdoors exposed to the sun. Exposure to sun helps to produce vitamin D in the body, which plays a key role in bone formation and strengthening.

Source:

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