

**BASIC CONCEPTS
OF
DIET THERAPY**

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Food is a basic prerequisite for our survival. The quality and quantity of food determine the health and nutritional status of an individual. An individual's nutritional status depends upon the provision of sufficient nutrients through food. Apart from nutrients food also contains some non-nutrients which sometimes play an important role in fighting against diseases.

Food will nourish and promote health only if it is of the right kind, eaten in the right quantity, at the right time, in the right manner otherwise it will eat us up. Among the several other factors the most important is our habit of eating. It is the only factor that can be controlled and corrected with rewarding results, therefore food is directly related to health as food provides nutrition through nutrients it contains and these nutrients perform various functions in the body as physiological, regulatory and body building etc. Human body is like a machine and its performance depends on the material of which it is composed and the type of fuel or nourishment it gets.

The basic components of human machine and the health and fitness of the body depend on:

1. Genetic traits
2. The quality of material used in its construction
3. Regular maintenance

Life style exerts the strongest overall influence on health and longevity. Life style behaviour like smoking habits, diet, drugs, less physical activity, psychological stress and amongst all these factors the most important is our diet which is the most important controllable factor affecting human health.

PRINCIPLE OF DIET THERAPY

1. The modified therapeutic diet should be based on a normal diet.
2. Therapeutic diet should fulfill the necessary food requirements in the simplest way.
3. It should be planned according to the patient's likes & dislikes, religion and constraints.

4. Complete knowledge of the disease should be gathered so that required changes in the diet should be done.
5. Possible duration of the disease should be considered (acute & chronic)

The keywords for Diet Planning:

1. Accuracy
2. Adequacy
3. Economy
4. Palatability
5. Flexibility
6. Digestibility

PURPOSE OF DIET THERAPY

1. To improve the nutritional status of patient.
2. To correct any existing nutrient deficiency.
3. To maintain optimal nutritional status.
4. To provide rest to the body.

A therapeutic diet is usually a modification of regular diet but before planning diet for a person certain considerations should be kept in mind for eg. the socioeconomic status, occupation, medical history ,any food allergy ,nutritional status, occupation, number and time of meals ,food likes and dislikes etc.

METHODS OF FEEDING

When prescribing a diet it is an essential step to consider the socio-economic status and occupation of the person, his religion and dislikes, acute and chronic nature of disease food taken away from home. Oral feeding method is best but it becomes necessary to provide nutrition through other means in certain cases and for those who cannot swallow in severe nausea and

vomiting, anorexia, unconsciousness, semi-conscious, severely under-nourished short bowel syndrome, neurological disorders and LBW (low birth weight babies).

Methods of feeding--

Oral

Feeding <

Special Method==

Intravenous

Parenteral feeding

Tube feeding---

Jejunostomy

Rectal feeding

Gastrectomy

1. INTRAVENOUS FEEDING- The objectives of intravenous feeding is to provide:

- a. Water & electrolyte balance
- b. Energy
- c. To make-up for the loss of tissue protein

It is given in surgery for cancer patients and for those who are unconscious. The nutrients used are water, electrolyte, carbohydrate & alcohol, amino acids, whole blood or plasma emulsified fats & vitamins.

2. PARENTERAL FEEDING- is a means of providing nutrients by routes other than through mouth & digestive tract such as:

- a. Subcutaneous route
- b. Intramuscular route
- c. Intravenous route

Intravenous feeding is of 2 types:

1. Peripheral venous infusion.

2. Infusion through a polythene tube into deep vein common e.g. of this is standard intravenous dextrose with added electrolyte through the peripheral veins. This provide an immediate source of energy 170 KCal/l/day, until the patient can eat normal.

Parenteral Nutrition is appropriate when oral or enteral route is inadequate or contraindicated. It can be used alone or in addition with enteral feeding. When it is the main source nutrition, other nutrients have to be given via small vein usually in the arm called PPN or centrally into the superior or inferior vena cava called CPN/TPN. The decision to use PPN or TPN is based on the-- Number of calories needed.

- Duration of parenteral nutritional support.

- Osmolarity of the solution.

TPN is given for those who cannot will not or should not eat enough. TPN is ..an...alternative... system of feeding that by passes GIT.

DEFINITION OF TPN

Administration of all required nutrients directly through the vascular system rather than GIT is called TPN.

A nutritionally adequate solution is administered through the veins. IN TPN, carbohydrate, fats as a lipids, emulsions & proteins as a crystalline amino acid solution, vitamin, minerals and trace elements are added together with several modification as need.

CYCLIC TPN- refers to intermittent infusion of intravenous solution over a specific period of time, usually at night.

Conditions where TPN can be used:

1. Chemotherapy
2. GIT, is unavailable for digestion
3. Radiation
4. Bone marrow transplantation
5. Severe malnutrition

6. For those who cannot receive adequate nutrition by central feeding within 7 days.

Conditions where TPN is not used:

1. Where GIT is available for digestion.
2. Family members / guardian of patient are against TPN.
3. Sepsis or infection is present.

The nutrient used in Intravenous Feeding are:

1. Water & Electrolyte
2. Carbohydrates
3. L-amino acids
4. Fats
5. Vitamins
6. Sometimes, when necessary blood & plasma.

Type of routine hospital diet--

Liquid diet : It has no residue, non irritating and non stimulating. It is advised to the patient after surgery. For eg. whey water, coconut water, clear soup, lemon water etc. It may be clear fluid, liberal fluid or full fluid type.

1. Clear fluid: Fluids and foods that are clear liquid at body temperature are prescribed.
2. Full fluid diet: This diet bridges the gap between clear fluid and soft diet, has very low fibre content and is given at 2-4 hour interval and may be nutritionally adequate For eg. Suji kheer
3. Soft diets: It is made of simple digestible foods that contains no harsh fibre or spices. For example khichri, stewed fruits, , dalia, kheer etc.
4. Regular hospital diet—It is most frequently used diet, simple in character and preparation, easily digested and gives maximum nourishment.