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ROLE OF NUTRITION IN INFECTIONS AND DISEASES

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Abstract:

Infection with fever is a very common occurrence in our country. Our body is constantly under attack by infections agents, which are fought back. It is when the infection overrides the fighting capacity of the body that infections or fever appears. The body has immune systems and other defense mechanisms. Failure of these Precipitates infection. The role of nutrition is to maintain and strengthen these defense mechanisms of the body to fight the invading germs. Precipitated infection, however mild it may seem, can play have on the body resource, increasing the need for several nutrients, especially fluids, energy proteins, vitamins electrolytes. In case the infections are accompanied by fever, it adds to the nutritional stress since fever increases the metabolic rate, enhancing the energy needs. Fences of either long or short duration are caused by influenza, typhoid, tuberculosis, malaria, etc.

Keywords: *environmental effect, infection, nutritional status*

Introduction:

Infection as defined by the medical dictionary is the successful invasion, establishment and growth of micro-organisms in the tissues of the host. A healthy person has adequate resistance to infections. This ability is hampered by a poor nutritional status such a person falls an easy prey to infections frequently either in the form of cough and cold or marginal fever, feeling of weakness and other minor complaints.

Effects of infection on Body Mechanisms:

Infections affect the nutritional status of the body adversely and significantly. The extent to which it will be affected depends upon the following.

1) Nature of the infection or infections disease
2) Severity of the disease
3) Period for which it persists

4) Presence or absence of fever
5) Nutritional status of the person before the setting in of the infectious disease.

Diarrhea:

In India majority of the gastro-intestinal disease are water borne. Children in particular are prone to disease such as jaundice cholera and typhoid. One of the most common and dangerous ailments which small children suffer from is diarrhea, which frequently causes dehydration through the passage of loose watery stools, in other words, it is a morbid evacuation of the bowls, the stools being fluid in nature with increase frequency. The number of stools varies from several per/day to one every few minutes. It often accompanies conditions such as ulcerative colitis, various infections of the bowel and most forms of gastro enteritis.

Causes:

Overeating or eating Foods difficult to digest, infection in intestinal tract, fermentation caused by incomplete carbohydrate digestion nervous irritability and excess intake of laxatives are some causes other causes are parasites, Bacteria, or toxins through food and water. Allergies to certain substances or foods such as milk, wheat, egg and sea foods, emotional strain or stress in adults and fright in children; antibiotics and some drugs can cause diarrhea.

People with poor nutritional status are preening to infection and they also take time to recovery. In our country, infants and preschoolers from the most vulnerable group immunity is a complex result of many components, some native and heritable, others acquitted. Specific antibodies check the infection. These antibodies are made up of proteins, hence, if the proteins status of an individual is good, these antibodies well be present in adequate number to resist the invading infection. Poor nutritional status will result in lowered resistance to infections.

Tuberculosis:

In India, tuberculosis in a major causes of illness and death. According to one estimate, one in four Indians is infected by T.B. tuberculosis is cause by the bacteria mycobacterium tuberculosis. It is

transmitted through the cough or sneeze of an infected person, when it gets sprayed into the air. Most people which breathe in the bacteria do not get infected even offer inhaling the bacteria, the micro organisms may remain dormant as their immune system triggers activation of macrophages, which engulf bacteria. About 10 percent of those infected develop tuberculosis some time in their life when the natural immunity is lowered.

Diet:

A high protein, high calorie diet is prescribed. It must provide sufficient energy i.e. about 2500-3000 calories and 75-100g protein. Iron supplement of vitamin C is needed. Vitamin A must be included in the diet.

Fever:

Fever often accompanies infection. The patient may have chills duel to fever no complain of feeling cold. But all fevers are no result of infection. All elevations in body temperature are not fever.

Infection affects protein catabolism (breakdown), often decrease food intake and increases nutrient loss through vomiting or diarrhea. Enteric (intestinal) infection as in typhoid, interfere with absorption and reduce nutrient utilization. Fever, which often accompanies infection, increases energy needs of the body[about 7% per degree Fahrenheit] above normal temperature fever may be acute and of short duration as in colds, intermillent as in malaria or chronic as in tuberculosis.

Diet:

The dietary treatment varies with the kind of fever and its duration. When fever is acute and of short duration, the most important aspect is to feed sufficient fluids and electrolytes to make up for the losses from the body. As appetite is usually poor, frequent small feeds of liquid and oft foods need to be given to ensure adequate intake. As the condition improver, the size of the feed is increased to meet nutritional needs. The critical problems is protein breakdown, which occurs in infection.

A high calorie diet is Prescribed.

High Protein High Calorie Diet

Food	*Serving*	*Protein*	*Kcal*
Milk	800 ml	26	535
Egg	1	6	25
Cereals	6s	15	510
Vegetable	4s	15	100
Fruit	3s	1	180

Foods to be avoided:

1) High fibre foods e.g. whole grain cereals and their products (dalia, whole wheat flour chapattis) whole pulses (rajmah), chholey, peas etc.) pulses with husk.
2) All raw vegetable and fruits except papaya and banana
3) Spices, pickles, chutney, sauces
4) Fried foods (samosas, pakoras, poories, kachori, parantha)
5) Strong flavoured vegetables (onion, garlic, raddish turnip, cabbage, capsicum)
6) Deserts (Cake, Pastry, Halwals, laddoos).

Food Included:

1) Plenty of fluids (fruits juices, soups, milk and milk based beverages) coconut water, sugarcane juice.
2) Egg, cheese, fish, tender meat, poultry
3) Low fibre foods (rice, vermicelli, semolina, bread, noodles) dehusked pulses, well cooked fruits and vegetables in soft blanded form and potatoes.
4) Gelatin based desserts (Jam, jelly, honey, custard, rice or suji kheer, stewed apple, fruit cream)
5) Steamed food (suji, idli, upma, uttapan, dhokla)
6) Fruits, banana and papaya and cheeku, custard apple, apple stew, pear.

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