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Functional Foods for Better Health

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Abstract

Food is very important for human beings in health and disease. To larger extent, human beings struggle to obtain food in day today life. Apart from this food struggle and shortage, the human face nutritional deficiency diseases. The nutritional diseases are protein energy malnutrition, endemic goitre, nutritional anemia, nutritional blindness and other related diseases affects individual life. Functional food plays a vital role in providing essential nutrients to the human and their well-being. The simple meaning of functional food is that food which provide health benefits that is basic nutrients. The basic nutrients include micronutrients and macro nutrients such as vitamins minerals, fat and protein. The concept of functional foods was first developed and introduced in Japan in the mid 1980's. Since then there is no clear meaning and definition for functional foods. It includes the primary categories of foods like conventional, modified food ingredients. Normally foods are considered as functional when it contains a bio active component and non – nutrients. Bioactive components are nutrients like vitamins, minerals, protein etc., and non- nutrients are phyto chemicals like poly phenols, prebiotic dietary, fibers etc. which affects the individual physiological functions in the body. This improves the well-being and health reduces disease risk and improves the disease outcomes. Thus, functional foods include nutraceuticals, dietary supplements, and medical foods. The consumption of functional food helps to achieve specific health benefits. This functional food leads to follow a healthy dietary pattern. This healthy dietary pattern is important for maintaining optimal health and reduce chronic disease risk. So, an attempt is made to study the functionals foods for better health in India.

Objectives

- To study the main types and components of functional foods.
- To examine the health benefits of functional foods.
- To Know the best functional foods needed for better health.

Review of Literature

Daniel Granato and others (2020) in their article on "Functional Foods: Product Development, Technological Trends, Efficacy Testing, and Safety" stated that Functional foods, beverages, and ingredients will play a decisive role in human nutrition as long as the concept of functional foods is widespread in the general population. Because of financial burdens, governments worldwide should incentivize the establishment of companies that are devoted to the research and development of foods that can actively have potentially positive effects on human health

beyond basic nutrition. Food scientists and technologists should bear in mind that functional foods require in vitro, in vivo (animals), and clinical trials to support any health claims by considering the current scientific advancements in human nutrition and food science, the functional food market must still be explored from the technologic and marketing standpoints.

Litwin N, Clifford J and Johnson S (2021) in their article on Functional Foods for Health stated that Functional effects and potential mechanisms may be evaluated through basic research (cell and animal studies) and/or clinical research (human studies). The results of such studies are then used to support new hypotheses for human nutrition studies. The results of human nutrition studies provide necessary information to determine whether more research and development is needed to enhance the function of the food or food component, to reduce disease risk, or improve disease management.

Morayma Ramirez Damian and others (2022) in their article on "Functional Foods, Nutraceuticals and Probiotics: A Focus on Human Health" stated that Functional foods are classified as traditional or staple foods that provide an essential nutritional level and share potentially positive effects on host health, including the reduction of disease by optimizing the immune system's ability to prevent and control infections by pathogens, as well as pathologies that cause functional alterations in the host. probiotics have a wide application in the medicinal area, in the veterinary field, in the industrial food area, and in the technology sector to produce nutraceuticals and drugs; however, it is still necessary to study various models of isolation of probiotic bacteria, as well as different isolation sources.

Functional Foods are Classified Into Conventional, Nutraceuticals, Probioitcs and Prebioitcs.

- **Conventional Foods:** It is unmodified foods. It consists of fermented dairy and meat based food. Exmples: Yogurt, Cheese, Sausages, meat etc.
- **Nutraceutical Foods:** It is a food combining nutritional and pharmaceutical effects. It consists of products containing concentrated food derived from nutrients. Example: Power and Pill for vitamins A, B6, B12,C, D, E, Unsaturated fatty acids etc.
- **Probiotics:** It is a live microbial food supplement. It improves intestinal microbial balance. This microbial or enzymatic balance improve mucosal surface or stimulate immune mechanisam. Example: fermented vegetables, buttermilk, bioghurt, Yakult, Koumiss.
- **Prebiotic:** It is an indigestible food ingredient. It stimulates the growth of activity of bacterium in the colon. Example: Neosugras, insulin, palatinose, lactosucrose, sorbitol.

Benefits of Functional Foods on Health

- 1. Provide antioxidants such as carotenoids, flavonoids,lycopeneetc which fight against radical damage.
- 2. Reduce inflammation.
- 3. Prevent disease like reduce the risk of cardiovascular diseases neurological conditions, depression etc.,
- 4. Enhance immune system and support good health.
- 5. Provide probiotic bacteria.
- 6. Provide prebiotics
- 7. Reduce pathogenic bacteria and microbes

Thus, all these functional foods protect from illness, negative effect of stress, inflammatory compounds, obesity etc.,

Best Functional Foods Need for Better Health

- High antioxidant foods: It covers a wide variety of coloured fruits and vegetables. It is the best source of antioxidants which support cellular health and fight oxidative stress. Example: Raspberries, Carrots, Papaya, Orange etc.,
- Green foods: Grasses and sea vegetables. It is full of phytonutrients, vitamins and minerals which is obtained from other plant foods. Example: Chlorella barley grass, wheat grass etc.,
- High fiber foods: Fiber is important for digestive health, heart health and appetite regulation. It is obtained in vegetables, fresh fruits, coconut, legumes, grains, nuts and seeds.
- Probiotic foods: It is fermented cultured foods. It protects the living of the gastrointestinal tract. It helps in the absorption of nutrients and prevent common digestive issue and fight against infections. Example: Sauerkraut and kimchi.
- Prebiotic foods: It is carbohydrates or fibers resist digestion and help to feed probiotics. It helps the digestive enzymes and support nutrient absorption. Examples: Leeks, Onions, Garlic, Banana, Beans etc.,
- Omega 3 foods: Omega 3s help and lower the risk of heart disease, depression, Joint pain. It supports brain function. Example: Walnuts, chia seeds, salmon sardines.
- Nuts and seeds: It provides healthy fats and fiber. It protects heart ad brain . Example: Almonds, Cashews, Flau chia, hemp etc.,
- Teas, herbs and spices: Green tea, black tea, turmeric, ginger, parsley cinnamon are the antioxidant food. Fresh herbs gives extra calories. It has anti-inflammatory and antimicrobial properities. Example: Redwine, Coffee, Cocoa
- Bone broth: It is rich in amino acids and antioxidants. Example: Glycine, orginine, vitamins, minerals and collagen.

Conclusion

Fucntional foods in widespread concept in the general public. It provide benefits beyond basic nutritional needs. This beneficial nutrients in functional foods present naturally or added during manufacturing of products. The functional foods has positive impact on health. It supports disease management and prevention. It boosts the benefits and heightened the consumer awareness and consumer acceptance of better health in the food economy.

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