

Functional Foods and Nutraceuticals, Definition, Concept and Origin



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Functional Foods

IFT : Food & food components that provide a health benefit beyond basic nutrition(for the intended population) including conventional foods, fortified, enriched or enhanced foods & dietary supplements. They provide essential nutrients often beyond quantities necessary for normal maintenance, growth, development and or other biologically active components that impart health benefits or **desirable physiological effects** (Mac Aulageta,2005)

Institute of Food and Information Council (IFIC) states that functional foods “ provide health benefits **beyond basic nutrition**” (Hassler et al., 2004)

ADA: Functional foods are foods that have health benefits beyond the nutrients they contain (ADA, 2005)

Origin of Functional Foods

The concept of functional foods originates from ancient China and then shifted to Japan long ago

- ❖ Arai (2005) gives a concept of **Medicine and Foods are Isogonics**
- ❖ Similarly Hippocrates (460-377B.C) **“Let food be thy medicine and medicine be thy food”**
- ❖ Hasler in 2001 renew this term of functional foods
- ❖ Japan Ministry of Health and Welfare initiated the World first policy of legally permitted the commercialization of selected functional foods named “food for specified health use”(FOSHU).

FOOD

Consists of CHO's, fats, proteins, vitamins, minerals, water and roughage

Add bioactive compounds other than nutrients

Functional Foods

Normal body functions i.e. growth, repair, energy production and protection

Remove specific harmful ingredients

Basic nutritional functions+ physiological health benefits and reduced risk of chronic diseases

A natural food product can be engineered to become a functional food by:-

Increasing specific components (**Phytochemicals**) to reach a concentration more likely to express health benefits

Adding components not normally present but having a beneficial effect

Replacing a component that is excessive and harmful with one having a beneficial effect

Improving the bioavailability of components having desired health benefits



Nutraceuticals

❖ A nutraceutical can be defined as a diet supplement that provides a concentrated form of bioactive compounds of food in a non-food matrix to enhance health and prevent disease

Examples : Carotene and anthocyanidins

Derivation of the term nutraceutical

NUTRITION

PHARMACEUTICAL

NUTRACEUTICAL



Prerequisites of Functional Foods



Should foods, not capsules, tablets/powder derived from natural ingredients

Should be consumed in daily diet as full or part

Should contain the functional ingredient in sufficient quantities/ cure disease

Perform a particular function of prevention /cure of disease when ingested

Functional Foods Vs Nutraceuticals

Functional Foods	Nutraceuticals
Should look as a conventional food stuff. e.g. Bread, juice, flour etc.,	Are available as powders, capsules, concentrates etc.
Necessarily a part of our daily meal and basic food stuff	Not a part of daily meals
Functional foods contain nutraceuticals as one of their constituents	These when incorporated into basic food stuff make it functional