

Nutraceuticals: as a food and Health

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Submitted: 10-02-2024

Accepted: 19-02-2024

ABSTRACT:-

In recent years, there interest in nutraceuticals that have health benefits and can replace traditional medicine. Foods, herbs and food products are the main components of nutraceuticals that help maintain health, prevent various diseases and therefore improve the quality of life.

Developing countries also face problem such as aging population, energy shortages and malnutrition. Gastrointestinal research is needed to develop new functional models of the gastrointestinal tract and diagnostic tools that allow the testing in controlled trials.

Keywords: Nutraceuticals, functional food, food supplement, intestinal health, probiotic, intestinal cell models, gut research.

I. INTRODUCTION:-

In recent years, a new health system has been developed that pays more attention to nutraceutical quality. The new lifestyle adopted by people today's has changed the simple diet of today's people. Malnutrition is increasing and causes many diseases due to malnutrition. Obesity is now considered a global problem. Heart diseases is still the leading cause of death in many countries around the world; This is followed by cancer, osteoporosis, arthritis and many other diseases

.Consumers are tired of expensive, expensive treatments for diseases and the bureaucracy of the administration process for nutraceuticals by modern doctors looking for supplements or other benefits. Hippocrates, words about 2500 years ago, "Let food be thy medicine and medicine be thy medicine", can still be defended today. Nutraceuticals are new group of neutral products with traces of food and medicine (Adelaja and Schilling 1999). [1]

Nutraceuticals:-

The term "Nutraceutical" was coined in 1989 by the medical Innovation Foundation (New York, USA, an educational foundation established in the United States to promote disease discovery for therapeutic purposes) to provide information on this rapidly involving subject< biomedical field. Name of the research area. Nutraceutical can be defined as a substance that can be considered a food or part of food and that provides medical or health benefits, including the prevention and treatment of diseases (Defelice, 1992). Nutraceuticals include isolated nutrients, dietary supplements and nutritional supplements for "natural" foods, herbs, and processed products such as cereals, soups, and beverages. [2]



Fig.1 Nutraceuticals

Benefits:-

- 1) The ability to add healthy value to our food.
- 2) It will help us live longer.
- 3) It can help us avoid some diseases.
- 4) Doing something for yourself can be beneficial to the brain.
- 5) It can be considered more “natural” and less likely to cause negative side effects than traditional medications.
- 6) Foods can be provided to people with special needs (Such as good food for the elderly). [3]

Caterizing nutraceuticals:-

Nutraceuticals can be developed in many ways for educational guidance, clinical trials, food production, or teaching, eating and drinking, depending on how easy they are to understand and use. Some of the best ways to classify nutraceuticals are by food, processing, chemicals, etc. can be made based on. All foods used can be divided into the following groups: (Kalia 2005; Kokate et al. 2002):

- 1) Dietary fibre
- 2) Probiotic
- 3) Prebiotic
- 4) Polyunsaturated fatty acids
- 5) Antioxidant vitamins
- 6) Polyphenols
- 7) Spices

In the next part of the review, the health benefits and treatment of some nutraceuticals will be briefly explained. More generally, nutraceuticals can be divided into two groups. (Pandey et al. 2010)

- i. Potential nutraceuticals
- ii. Qualified nutraceuticals

A potential nutraceutical becomes a Nutraceutical only after valid clinical data on its nutraceutical benefits to health and medical care create food products. It is worth noting that many nutraceuticals still fall into the “potential” category. [1]

Food and Health:-

The diet is established early. In fact, it is known that the early periods of life (intrauterine period and the first year of life) are sensitive to nutritional factors. The World Health Organization (WHO) has emphasized that exclusive breastfeeding for two years or longer is essential for public health measures to be effective,

including the introduction of complementary health (CF) is to reduce the risk of chronic diseases. It is now known that after the age of two, children should eat the same healthy foods and adults, especially food that are sugar-free, salt-free, fat-free, and rich in carbohydrates, fruits and vegetables. [4]

Dietary intake of fruits, vegetables, and whole grains is isolated with an increased risk of chronic diseases such as cancer and cardiovascular diseases (CVD), which are the causes of most deaths in Europe, the United State, in most industrialized countries. [4]

Cardiovascular Diseases:-

Cardiovascular Diseases (CVD, including heart diseases and stroke) are the leading causes of death and have a major impact on human health and social well-being in Western Countries. More than 60% of deaths in developing countries are caused by cardiovascular diseases and cancer.

Risk factors for CVD including obesity, high cholesterol, high blood pressure and type 2 diabetes. CVD risk is increased not only by malnutrition but also by lifestyle factors such as smoking and drinking. [4]

Obesity:-

Obesity is a disease caused by excess fat in the body. Obesity as a condition is associated with decreased life expectancy and or increased health problem. Therefore, obesity is not just a facial problem. Many studies have shown that more body fat is associated with an increased risk of many diseases. Weight loss has been recognized to provide significant health benefits in obese individuals and is associated with improved quality of life in those with obesity. [4]

Cancer:-

The development of cancer is a dynamic and long-term process in which many complex factors proceed step by step, ultimately leading to the uncontrolled spread and growth of the tumour in the body, called metastasis.

Additionally, many ingredients whose nutritional benefits are still unclear have been found to have antibacterial and anti-inflammatory properties. These successful studies provide incentive for the future recognition of bioactive compound as anti-inflammatory drugs. [4]

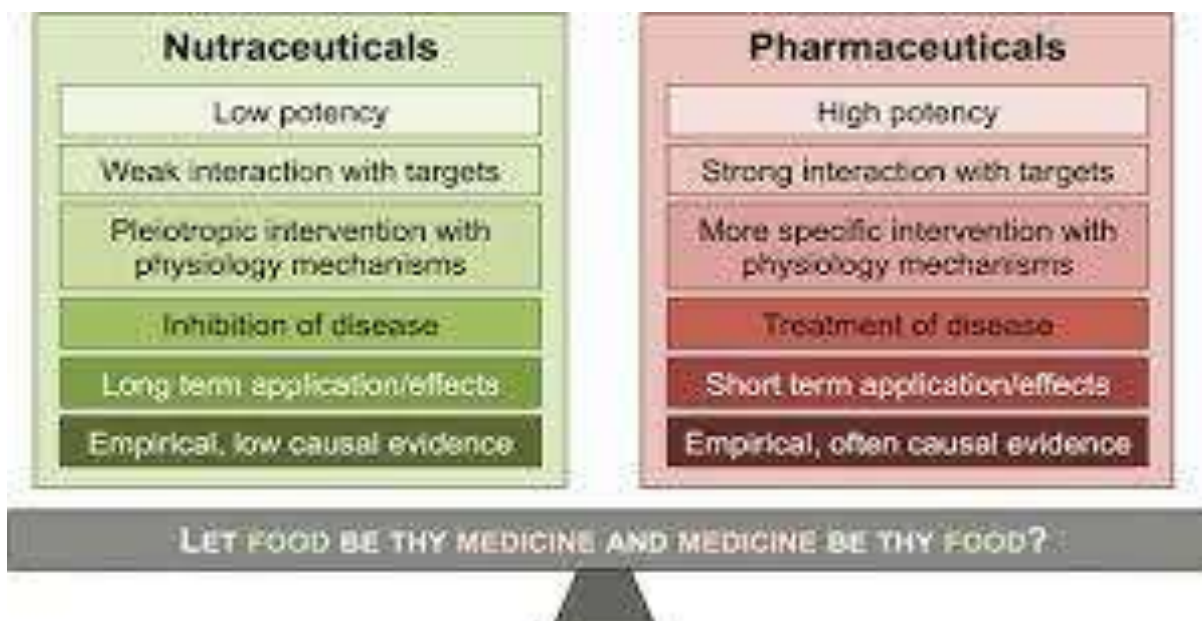


Fig.2 Difference Nutraceuticals and Pharmaceuticals

Global demand on nutraceuticals:-

Global demand for nutraceutical ingredients increased 5.8% annually, reaching \$15.5 billion in 2010, serving the \$197 billion global food industry. China and India will be the fastest growing nutraceuticals markets because the growing economy will allow them to adapt and expand their food, beverage and pharmaceutical production capacities.

Increasing acceptance of herbal and non-herbal Extracts in 2010, Consumers and practitioners predicted that global demand for herbal and non-herbal extracts increased by 6.5% annually reaching \$1.85 billion. Demand for nutrients, minerals and vitamins reached 9.5 billion dollars in 2010, an annual increase of 6.3 compared 2005. [5]

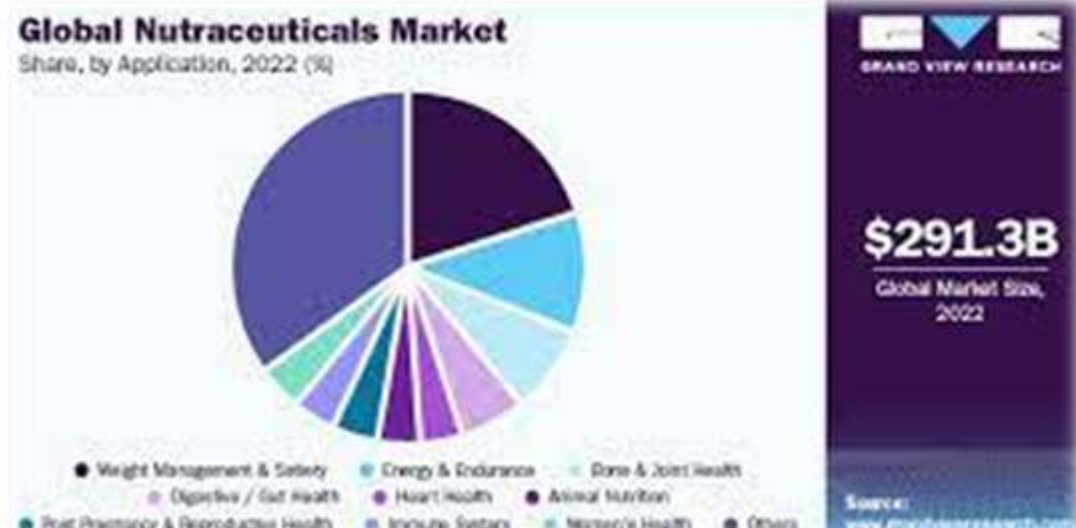


Fig.3 Global Nutraceutical Market

Global demand for nutraceutical vitamin products increased by 4.6% annually 4 it reached 2 billion dollars 2010. Natural formulas of Vitamin E and beta carotene (Vitamin A) will also be

successful in the world market as they has positive effect on synthetic ingredients in food products for adults and children. [5]



Area covered by nutraceuticals products:-

Anti-rheumatic drugs, all medical fields such as pain, cold and cough, sleep disorders, digestion and prevention of some cancer, osteoporosis, blood pressure, cholesterol, depression and diabetes, all paid nutraceuticals. [3]

II. CONCLUSION:-

The dietary supplement industry is growing faster than the food and pharmaceutical industries. In tomorrow's market, the best nutraceutical operates will likely be companies whose products are just one part of a broad range of product that meet basic and technical health requirement. Future demand for nutraceuticals depend on consumer's perception of the relationship between diet and disease.

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