

Looking at Foods More Vividly

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Abstract: *The paper's focus is on reviewing of the constituents of the foods that help sustain life, aid growth and maintain the body systems and organs in general, the foods that are immunity boosters and those specific foods having within them the medicinal properties. Going by the popular saying that "all drugs are chemicals, but all chemicals are not drugs", the study is an attempt to find the rationale behind some foods or food constituents which have immunity enhancing and medicinal properties. The search for the study is carried out with the hypothesis that the "foods are for life sustenance, immunity and disease fighting". The foods in general are for providing energy, for growth and maintenance of the body systems, and for the general well-being. Food is responsible for one to be healthy and sickness-resistant too. Thus foods act as immunity boosters to develop the capacity of the body to fight diseases on a preventive mode. Some of the foods, special as they are, act as medicines - directly fighting with the diseases to cure them. The paper covers all types of foods that our body needs, and provides vivid information which will be of guidance to people.*

Keywords: Life sustenance, Immunity, Food as medicine, Phytochemicals, para medicine

1. Introduction

Food is for sustenance of life - for a commoner – It is to live a happy and healthy life, and Medicine is one that repairs the body working internally at the level of cells and relieves it from the ailments people suffer from. Focus on to study the food and the medicine would however reveal the facts that difference is only in the kinds of food, as the medicines administered are also some kinds of foods at their micro level or contrarily, what is there in medicines is also there as a micro-level part of food one or the other type. This paper is one focused on to study the ancient concept of 'Food as food' and 'Food as medicine'. The stage then came when Food lost its status as medicine leading to the development of medicinal formulations made by using of chemicals for faster and the so called effective cure. Thus food lost its identity as a medicine, though traditional medical practices on the basis of Ayurveda, Siddha, Unani and other modes (in which herbal and mineral compositions are main ingredients) persisted and are still in practice. And in a situation like what is today – Covid-19 days – The traditional medicines are becoming popular due to their broad remedial properties. Allopathy or the English medicine, as it is also called, became popular with its so called benefits – the fast and effective cure from the diseases, notwithstanding the side effects of them.

The latest transformation in "Food" that we all see, has been that it has become a product of synthetic formulation'. That is, the Food has become a product now manufactured and made. Whether this is a progress that we are making or a travel-back will be a revelation that would come about in the future, looking at food as a primary and essential element as life support.

Life is a concept of bodily existence:

Food must have found its place the very moment the life emerged in this universe. Since life is a concept of bodily existence, food could not have been a later finding, as the human being, an animal or for that matter a plant right from

the micro organism onwards needs food for its sustenance, growth and maintenance of the bodily existence – i.e. from birth till death. The Body - big, small or microscopic is a manifested unit of life in the universe, enclosing within itself the mind and soul of the being - live and vibrant.

Food – the basic need

The body of the living organism requires food as the basic need. The just-born child cries the very moment it is out into this phenomenal world. The reason for its crying could be for more than one reason– but essentially the crying is an expression of hunger. Hunger therefore is the first and the foremost of the physiological feelings of the living beings. The body will cease to exist / dies, if food is denied to it beyond its capacity to starve. Food therefore has to be assumed to have appeared in nature when the life emerged.

Natural Food

Natural Food has for millennia been a part of living entity. It has been a part of Plant or animal life. There are certain minerals – representing non-living matter on the earth which are also consumed by the Plants and animals, but going by spiritual / metaphysical connotations even the minerals and all the non-living matter in the universe are also a part of creation and therefore life exists in them – of course, not visible and vibrant, as we see in Plants and animals. This is however not a part of our focus of study and hence it is only a passing reference. Food therefore is indispensable. Life ceases to exist when food becomes a non-entity. Food is the essential part of the lives of humans, animals and plants. The food underwent great transformation thereafter and for several millennia food had been a part of natural creation. Plants fed on micro-organisms and animals (including human beings) fed on plant based food apart from the animal based food. The death of human, animal and other vegetation became a part of the soil and the micro-organisms fed on the debris of the dead matter, and the cycle went on and on endlessly.

The latest transformation in “Food” has been that it has become a product of synthesis. That is, Food has become a product now manufactured and made. Food products contain chemicals in the form of Preservatives, Stabilizers, Colours, Flavours – most of which are chemicals. It has become highly rampant now. The advent of chemicals into the Food making may have answered many queries and solved many a problem. But the ill effects of the chemicals made out to form food products are slowly revealing the telling effects on human bodies. ‘Hitherto unheard of diseases’ and newer versions of health complications are surfacing now which are but the after-effects of the chemicals that invaded and made its place in our food products. Chronic diseases, deformities, faster aging, high mortality at the younger age are some of the known and seen complications today. The impact became so much that we are today able to feel that all this has been happening due to the chemical entry into our food preparations.

Food as food & a medicine too

The study on ‘Food’ takes us to its emergence, transformation and the journey that it has been undergoing and also its probable destination which could be a “travel-back” rather than a “travel-forward. The facts as to how food satisfied the hunger (its basic property), how it also worked as “a medicine” in the ancient days to cure diseases on account of metabolic disorders need to be delved into. It has to be also recorded about the subsequent development of ‘medicine’ – scientifically and inorganically formulated; how such inorganically formulated medicines affected the human lives – curing the diseases but becoming reasons for the side effects of them resulting in other complications leading to diseases unheard of before.

English medicines for Fast & Effective Cure

This paper is one focused on study on the ancient concept of ‘Food as food’ and ‘Food closer to medicine’. Food then lost its status as medicine leading to the development of inorganic medicinal formulations addressed and meant for faster and the so called effective remedies. Thus food lost its identify as a medicine, though traditional medical practices on the basis of Ayurveda, Siddha and other modes also persisted and still in practice, where certain foods partially became a part of medicine.

Better understanding of foods through a comprehensive study which this paper has been chosen to deal with, reveals that **Foods are Foods** and also they are **Foods closer to medicines** – serving the human kind through their **immunity boosting properties** & also **supporting as para medicines** since they have the curative properties that are genuine and natural.

2. Literature Survey

The study carried out for writing this paper includes authentic articles and other sources in order to bring in relevant information required for supporting and discussing the hypothesis chosen for the purpose and concluding the statement made thereof.

3. Problem Definition

Are the foods having medicinal properties and do they act as medicines.

4. Methodology / Approach

Doing the Literature review of the authentic articles and others shown in the Reference section relevant inputs were considered for discussion to support and elaborate on the problem chosen to seek clarity.

5. Results & Discussion

A comprehensive study on Foods unravels a whole variety of foods which, apart from providing energy, aiding growth of body tissues and supporting other physiological systems, could also develop innate ability to raise the immunity levels of the body thus not allowing the diseases to affect them. While immunity boosting is one of a preventive mechanism to successfully face the attacks of disease spreading germs and micro organisms, the food-list also includes certain foods which are curative in nature – acting like medicines - to fight diseases and to drive them away bringing back the health to the normal levels.

Going by the above, the foods could be categorized as foods for life sustenance, growth and well-being. This is possible when human body gets all the macro & micro nutrients in right quantities and at the right periodicity. The second category of the foods which are a part of the main foods - a select few them augment the immunity in a great measure. These are the food items which keep the immunity of the body intact and protect it from the external onslaught. Immunity is the strength that the physical body and the systems gain and possess in fighting to stop the disease causing germs and drive them away. It is a known fact that our bodies are naturally endowed with the needed Immunity and this needs to be maintained and restored when required and kept in the right state. The third category of the foods helps in fighting the diseases when they affect people. These foods are curative and provide relief from the diseases to bring back normal health. With these THREE requirements in mind, the foods can be categorized as shown in the table below:

Table 1

Foods								
Life Sustenance (Growth & Maintenance)						Body Cleansing		Disease fighting
Energisers	Builders	Balancers	Catalysts	Reinforcers	Cleaners	Homogenizer	Immunity boosters	Disease fighters
Carbohydrates	Proteins	Fats	Vitamins	Minerals	Fiber	Water	Immunizers	Medicinal

Life Sustenance – Foods

Humans are omnivorous in nature and draw nutrition from food which could be from either plant and animal sources or both. Certain edible fungi such as mushrooms also serve as food. The vital nutrients that can be obtained from food are carbohydrates, proteins, fats, vitamins and minerals.

Energizers - CARBOHYDRATES are sugars and they comprise of Carbon, Hydrogen and Oxygen. These form the primary source of energy. Carbohydrates are monosaccharides (which are a simple form of it – Glucose, fructose are the popular monosaccharides) and disaccharides, which are lactose, maltose, Sucrose, etc. Disaccharides contain two units of sugars. Polysaccharides are the most complex sugars, ex. Starch, Cellulose, etc. Rice, Wheat, maize, etc., are the common carbohydrates. The process called Oxidation breaks Carbohydrates releasing energy which the human body uses to carry out the human functions. Energy is measured in terms of Calories.

Builders - PROTEINS - The building blocks for growth in our body are Amino Acids, which are the part of proteins. Proteins are not only complex compounds but are also high molecular. Proteins have a structural and functional role to play in all living cells. Proteins are important for growth and also repair of cells and tissues in our body. Proteins are available through Animal and plant sources. Milk, Cheese, meat & egg are animal based and pulses, soya beans, nuts and grains are plant based. Proteins get metabolized to support in energy requirements if and when the body needs, especially when we starve and do not have source of Carbohydrates.

Level of Oxygen is very less in comparison with the Carbohydrates. Hence Fats result in larger energy production during oxidization. Fats are positioned and stored under the skin. Food forms such as Butter, Ghee, meat, fish and nuts and oils are the primary sources. Approximately, nine calories of energy is released with one gram of fat burnt. Fats are responsible for important hormonal production.

Catalysts - VITAMINS are different organic substances which are required in small quantum. They are required for maintaining health and growth in higher animal life forms and they cannot produce energy. They are quite different from Carbohydrates, proteins and fats. Vitamins are required to be drawn from the external sources, as animal forms cannot synthesize them in the required quantities. Hence vitamins get the status of nutrients which are essential. They are catalytic in nature and they regulate the body functions. Lack of vitamins results in non-absorption of foods in the body resulting in bodily ailments. Humans need to consume different foods to fulfill the requirements of the vitamins identified as necessary – Vitamins A, B, C, D, E & K

Reinforcers - MINERALS - Certain minerals such as Iron, Zinc, Copper, Calcium, Sodium, Phosphorus, iodine are essential for the body together with the Vitamins and they also need to be consumed in small quantities only. Like bones and teeth require Calcium, Iron is important for

Hemoglobin that carries Oxygen to the tissues in the body. Minerals also support in the maintenance of body functions

Ref. No.1

Homogeniser - WATER – The essential requirement of Water for our body need not be over-emphasized, as 70% of the human body contains water supporting all the bodily processes. Water transports food and other nutrients to different parts of the human body. It has the flushing out function of toxins and other wastes – in the form of Urine and sweat. It also carries out of function of regulating the body temperature.

Cleaner - ROUGHAGE – The fibre content in the human diet, which is also called roughage, helps in the movement of food in the digestive system. Vegetables, Fruits and Cereals that consume, meet the requirement

Ref. No.2**Immunizers – for Cleansing**

Immunity means and implies a state under which one is protected from infections and disease causing environment. One may be immune to some diseases but not all. It is actually a resistance power and ability of one to be unaffected by a disease. The most important characteristic of immunity is that system senses and differentiates the own body cells and those of others – the foreign microbes. Immunity is of two types – Natural immunity and the Acquired immunity.

Immunity which is natural is the capacity to resist disease. It originates from birth and it's genetic in nature. The expression of it could be different - physiological & biochemical. 'Lysozyme' in the tears, Saliva and the secretions of other body organs represent immunizers. Even the acidic-pH in the gastro-intestinal tract and even the very same anti-virus 'interferon' produced by the cells in the body

The Acquired immunity, however, is known to develop after birth. Antibody presence is the reason for it. It is often called Acquired immunity. It is also the immunity that is developed by body after the administration of Vaccine.

Ref. No. 3

The immune system however is quite complex and is determined by a right balance of different factors. It is just not diet alone. One type of food or nutrient does not result in immunity, as it is a combination of several factors. Balanced diet with the needed vitamins & minerals working together brings about the immunity. Lifestyle is another factor – body exercise, enough sleep and low stress levels are also part of the contribution for immunity to strengthen. The body and more importantly the mind acting on it enables it to be infection and disease resistant.

It is not occasionally but consistently that the human body is exposed to harmful microbes of different kinds. Immunity system within us formed as a network protects people from the harmful microbes and disease spreading germs.

“Innate immunity is a first-line defense from pathogens that try to enter our bodies, achieved through protective barriers. These barriers include:

- Skin that keeps out the majority of pathogens
- Mucus that traps pathogens
- Stomach acid that destroys pathogens
- Enzymes in our sweat and tears that help create anti-bacterial compounds
- Immune system cells that attack all foreign cells entering the body”

Adaptive – also called acquired immunity learns to identify pathogens. Our body cells and the organs such as Spleen, Thymus, bone marrow and the lymph regulate such inner intelligence of the body. Not stopping at identifying, the body develops the antibodies – immune cells that rightly match to fight the external attack and vanquish them. Once done the body remembers the foreign attack and its nature and becomes thereafter an able fighter of the same or similar substance of foreign nature.

Ref. No. 4

Immunity Boosting foods - It is to be noted that the Immunity enhancing foods do not fight directly to kill the infectious germs, but they only enhance and strengthen the ability of the body cells – white blood corpuscles and make them trim and fit to work to its wonted characteristic. Vitamin C is an immunity booster which helps in fighting infections, but this is to be drawn from external sources such as Orange, Lemon, Lime, etc.

When the systems – which mean up to the level of tissues and cells are hale and healthy with the required growth, maintenance and fighting qualities, they would not allow the disease causing germs to make successful bid to affect us. Immunity hence is an inherent fighting strength which is a part of the physiological system. Immunity boosters are therefore enablers but they do not fight with the disease causing germs to directly causing a relief, they enable the body to acquire the strength required to fight diseases. Our food intake therefore should be to stay healthy by creating habits that go to strengthen immunity. Right and regulated food habits, enough sleep, stress management, developing active habits, keeping hands clean are those habits which strengthen immunity

Whole Foods

Eating whole foods avoiding processed or refined food items is one clearer way to ensure healthy food habit. Even partially processed or refined foods also do not fit the bill. Whole foods are unprocessed and un-refined grains, legumes, fruits, tubers and of course vegetables.

“The earliest use of the term in the post-industrial age appears to be in 1946 in *The Farmer*, a quarterly magazine published and edited from his farm by F. Newman Turner, a writer and pioneering organic farmer. The magazine sponsored the establishment of the Producer Consumer Whole Food Society Ltd, with Newman Turner as president and Derek Randal as vice-president.[4] Whole food was defined as "mature produce of field, orchard, or garden without subtraction, addition, or alteration grown from seed

without chemical dressing, in fertile soil manured solely with animal and vegetable wastes, and composts there from, and ground, raw rock and without chemical manures, sprays, or insecticides," having intent to connect suppliers and the growing public demand for such food.[4] Such diets are rich in whole and unrefined foods, like whole grains, dark green and yellow / orange fleshed vegetables and fruits, legumes, nuts and seeds”

The whole foods are special because they are the closest to the natural form. It has multiple constituents intact and they are all vital. The choice of processing / refining them is not an intelligible act but an act of losing a natural resource. Health experts vouchsafe that use of Whole foods exclusively is a prudent decision to improve health and to prevent diseases

Ref.N.6

Foods – Disease fighting

While certain foods are disease-fighting and traditionally used to cure diseases, they are not a total replacement for medicines. Medicines recommended by registered medical practitioners for diseases are scientifically proven to cure diseases, hence only they are legally permitted. The foods traditionally used for curing specific diseases were claimed to have achieved noted success. However since they are not supported by scientific trials, recorded results and approvals of concerned authorities thereof, they are not permissible for administering solely replacing medicines. Ayurveda and Sidhha formulations are different – they also use certain food based items as raw material for development of drugs. But these medical practices and the medicines that they recommend and administer are scientifically proven and cleared for usage by the Government.

There could be back-end information that the medicines and their formulations are based on plant based material fully are partly, but the authenticity on the combinations of such extracts and measures of them reckoned for such formulations cannot be related to the special foods which are broadly considered to have medicinal properties and recorded instances of cure. Hence the authenticity about their usage per se and the form of such select items and the measures required, are not either tried out scientifically nor accepted for administration.

Although many foods have strong disease-fighting benefits and some of them are also the sources for drawing the raw material for preparation of conventional medicines, the food and the diet cannot be considered as replacement for medicine with all authenticity, as the systematic studies do not support such claims.

Ref.No.7 -

Phytochemicals

The paper cannot ignore the subject of Phytochemicals, which are non-nutritive plant based chemicals. They are produced by plants and are protective and disease preventive in nature . They are however, not essential as nutrients to humans life sustenance, but could only serve as those fighting against diseases. Thousands of Phytochemicals are reported to exist but only some – like **Lycopene** in tomatoes, **Isoflavones** in Soy and **Flavanoids** in fruits are popular.

Phytochemicals work as **Antioxidants** (found in Fruits and Vegetables) protecting human cells against Oxidative damage; as **Hormones** (found in Soy) which help effects of menopausal symptoms and osteoporosis; **Enzymes** (Found in Cabbage, beans and Citrus fruits) – helping in reducing the risk of cancer; **Anti-bacterial** (Found in Garlic); **Physically preventing barriers** – Layer covering cell walls - preventing the adhesion of disease causing Pathogens.

Studies reveal that most of our foods contain phytochemicals, except those foods which are processed and refined. Whole grains, fruits and vegetables are rich sources of phytochemicals. While studies are still on to have better findings on phytochemicals, the existing information and the recommendations serve our needs adequately, and it is only the right choice of foods and the right quantum of them that actually matter to maintain overall health and well-being.

Ref. No. 8

6. Conclusion

The study done and the observations made reveal that the foods are of variety of types. They cover all the needs of people meeting them through plant and animal based foods. The foods available for people essentially meet the *life sustenance needs* – energy requirements, body building requirements and to balance and maintain the physiological state of people thus help them enjoy health and well-being. The foods also include such of those, which in times of need enhance *the immunity of the body systems* working at the body cell level thus preventing and fighting the disease spreading micro-organisms to ensure the health of people is intact. There are also foods, special as they are, which work not only to act as immunity supporters but also **fight directly against the disease causing organisms at the micro level**. The fact that the sources of certain raw materials for the the production of the approved and prescribed medicines now in vogue are drawn from these food materials go to support that these traditional foods do work as para-medicines at a broader level in a natural way (though take a longer time of recuperation) providing relief from the diseases. As long as the human life exists, parallel concept of choosing foods - for life-sustenance, immunity boosting and also as traditional medicines - would continue. The revisit to the traditional medicines (which are part of foods) and their administration to tackle ailments especially during pandemic situations has endorsed strongly (by the community of science-seeking medical world) that the traditional-medicinal-foods do work and work more efficiently sometimes. Bringing to the fore the facts that one should know about foods, the paper covering the study and observations on range of foods, their properties and benefits would also serve as comprehensive information / knowledge required for a commoner, in one place.

7. Future Scope

The pandemic, Covid-19 affecting the whole world unraveled a situation when traditional foods were recommended for supporting immunity and also to work against bodily symptoms of the viral effects. Traditional foods and alternate medicines thus gained much better popularity during this period of time, through their immunity

boosting and curative properties. Hence belief / confidence on traditional foods acting as para-medicines is expected to be high in future

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