

Genome-Nutrifortified Diets-Their Disease Protection and Remedy Potential

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Abstract

In olden days food was considered merely to be a feed that supply nutrients and energy providing components to the living body whereas illness used to be considered to be impairment of body function either in response of any external stimuli such as microbes allergens etc., or some indigenous stimuli e.g., pathological event no matter whatsoever is, but it is evident by latest understanding on knowledge that food fills remedy. We have already submitted work revealing the underlying mechanism of impact of food on dynamics of ailment. In recent years food has been a key means to pollute the living entities including Human Body leading to cause a huge number of non-contagious diseases including mental ailment, Rab has demonstrated simple ways to validate the Food Safety domestically as well as to make them safer for consumption within domestically available facilities. In the under-developing region of Globe, inspite of availability of the extremely effective antibiotics, infectious diseases are still the key factors responsible for high rate of mortality whereas on other hand, extreme pollution and adulteration have contributed to raise the incidences of non-infectious ailments, inspite of having mal-nutrition as an additional factor, the incidences of Non-Contagious ailment has not raised as it is anticipated, the diet and social set up have played a significant role to buffer the non-contagious ailment in these global regions. This piece of work on Genome-Nutrifortified Diets discloses the scientifically modified recipes of a few health supporting food preparations widely taken in diet effecting the genomic modulation demonstrating the Healthy Phenotypic Profile on regular intake on individuals, whereas the active mechanism of accumulative active ingredients effect in modulating ailments providing a buffer would be discussed in our future Publications.

Keywords: Fermentation; Metabolic activities; Microbes; Epigenetics; Evolutionary biology; Illness cure drugs

Introduction

Since the Homo sapien is born on this earth, the illnesses go along wherever they go to dwell [1-3]. In olden days the key factors modulating the diseases progression pathways are mediated either by malnutrition or exposure to pathogens and allergens [4-8] whereas in recent days added until here environmental pollution, commercialized food products having produced with extensive processing and chemical treatments have become the key modulators for emerging new illness manifestations as well as governing the pre-existing diseases prognosis under natural conditions [1-3,4-8]. Darwin theory supports the hypothesis e.g., survival of fittest; genetically the fitter better the survival. Latest understanding suggest genes that are supposed to be linked with human behaviour and diseases are not operational in the same manner even within the same individual during a life span, rather are operational in networks regulated at transcriptional level [1] and so can be different in responses among individuals sharing the bloodlines or the family tree [9,10] obsolescing the concept survival of fittest, that is the supportive postulate defining the pre-existing concept of "Normal" in Human Behaviour Sciences, seems to be replaced by the opinion propagation in individuality supporting environment with complementing features helps to ensure Individuals Mental Health as well as general health [1,11-13] done here both are proven to be interdependent through mouth and gut connection regulated through microbes acting as intermediate

connection factor to external environment [1,11-15] obsolescing the habit of eating raw vegetables [16] has been the key factor for initiation of a huge number of illnesses as it has already been proved that appearance of any phenotype depends on environmental factors that act as stimuli on genomics of individuals [2,3,11-23] This paper reveals the composition of a few fortunutrified Diets helpful to cure a large range of diseases on regular use.

Nutrifortified Diets and Preparations

Whole grain flour kneaded in unglazed earthenware pottery with having a hold (incubation) under refrigeration condition for 24 hrs, makes Bakery Products e.g., Roti and parhatta (Bread, Petta Bread etc) nutritious as well as delicious at the same time whereas same is true for cooking good in unglazed earthenware.

It is preferable to soak pulses in water overnight, discard the water and cook on slow heating helpful to prepare more delicious and nutritious food. Garlic and Ginger are Natural Detoxifying Herbs, protect from joint pains, cancer, allergies etc. [24,25] and help to give young look but to enjoy their benefits at the best peel off garlic whereas use ginger along with the peel after crushing it in mortar pestle made of stone and holding it in air for 15 minutes every time fresh whenever plan to cook food. It is scientifically proven fact that regularly taking red chili (laal sabut mirch) cumin and garlic crushed in stone mortar pestle as chatni (sauce) along with the meal at least once a day helps to minimize the risk of cancer while giving the consumer a younger look [24,26]. Eating minimal fry fish is more healthy than deep fry fish. To enjoy the nutrition at the best, spread the

freshly crushed garlic pieces on fish fillets and leave it for 45 minutes under refrigeration condition, spread the mix comprising of chickpea flour added with finely crushed cumin black pepper red chilli coriander seeds salt quantity adjusted as per required intensity of taste. After marinating the fish soaked in mix for 30 minutes under refrigeration conditions, freeze the fillets into packets each containing fish into quantity sufficient for one serving. Around 2-3 hours before pan surface frying hold the frozen fillet packets at room temperature till they completely thaw.

The outcome of the preparation steps discussed earlier initiates biological activity along with the extraction of enzymes and other bioactive compounds, providing microbes an environment to mediate biotransformation along with release of a variety of factors on their decomposition as well as on breakdown chemical entities available in vicinity also taking place in newly formed diverse microstructures within the inner environment of the food item, activity prevailing there is different than occurring on the surface depending on the composition microbial flora and other intrinsic and extrinsic factors.

It is beneficial nutritionally to consume fish throughout the year even for people living at a warm place. The health benefits enhance multifold when fish is consumed with fermented yogurt. Fat is another extremely crucial component of food governing the health status of individuals. Panaspati ghee margarine, most of the commercially available fat based sauces mayonnaise all those rich in trans fatty acid are unsafe to consume [4-7,27-29]. Hand churned Natural ghee and Butter Mustard oil and Olive oil virgin but not the extra virgin are among the best choice for cooking as they are fairly stable not to breakdown during the cooking process to produce harmful compounds. Maiza and corn oil are good choices but not for frying or prolong cooking process whereas rest all oil types are yet to be scientifically proven not to be harmful as they on heating quickly break into harmful components that can increase the risk of cancer heart disease diabetics other non-infectious diseases. Using the same oil for repeated frying and in cooking can also make the food risky for health [30].

For a large number of infectious diseases e.g., zoonosis particularly from avian origin are found to be effectively cured within a week time by using Chicken Nutrifortified Broth.

Take 1 kg meat obtained after slaughtering grass grain fed chicken (slaughtered, Kosher, Halal) without blood but having skin on it including the wing pieces and cut it into small pieces while having skin attached with the meat. Take 2 litre of potable water in air tight lid having utensil, add 3-4 inch long ginger having finely chopped along with peel on it, 100 black pepper seeds, 17-20 cloves, Quarter tea spoon cumin and two-three pieces of cinnamon in the utensil boil it at low flame till the volume reduces to half. Give the freshly prepared Nutrifortified Chicken Broth with having added salt and fresh lemon juice to the patient at least two to three times a day until the symptoms disappears. Prepared Chicken Nutrifortified Broth can be stored under refrigeration conditions for 24 hrs ONLY. This is a simple process involving the extraction of bioactive compounds, having it mixed with immunologically active fraction from swine-avian origin as well as nourished with additional essential nutrients having accumulative therapeutic role when consumed on regular basis

For flu Ginger Fortified Honey Mixture heals the symptoms of flu and Respiratory Tract Related Illness within a week time.

To prepare Ginger Fortified Honey Mixture, take 8-10 table spoons full of Unpasteurized Honey available in Air Tight Glass Bottles,

preference is given to the Honey collected from Close vicinity that is produced under natural conditions, in mortar pistil made up of either stone or wood. Add finely chopped 7-9 inches long ginger with having peel on it and 70-80 black pepper seeds into it. Grind it until it turns into fine paste. Store the Paste in Air Tight Glass Bottle under refrigerated Conditions for 3-4 Days Only. Give a teaspoonful of the paste at least three to four times a day to the Patient until complete cure of the illness. The process involves extraction and biotransformation of biologically active compounds on having had exposed on open air in presence of native micro flora along-with providing an add to physical repairing by virtue of micro-structural potential of untreated honey that adds an additional dimension to the accumulative therapeutic role of the preparation when used on regular basis.

Microorganisms Activity in Food and its Impact on Human Beings

The micro-organisms, in a way or other are beneficial for human beings. A large variety of micro-organisms is generally found in food and water. Many of them are viable and active at a given conditions [16-22] modulating the status of Human and Animals Health. Under appropriate conditions these micro-organisms can bring about a large variety of favourable changes (fermentation) in different food commodities leading to the formation of cheese yogurt, cultured milk, soya sauce, pickles, herrings, saukrauts and development of flavour in food besides adding the nutritional value to them and modifying their microstructure. It is evident from earlier scientific findings that microbial products e.g., bacteriocins and organic acids produced during the activity of beneficial microbes in food, has significant role in extending the shelf life of these fermented products [31-33].

It has already been established that role of the beneficial organisms are not only confined to the food environment but have some role in conferring good health on people consuming the food commodities containing them in viable form [16-22]. Studies on laboratory strains suggest that some of these beneficial organisms have ability to transiently colonize in intestine, that leads to increase the number of micro-organisms present in the vicinity and hence make it difficult for disease causing organisms to colonize in gut thus protecting the host from gastric infections. Additional protection against enteric infections is conferred by many beneficial micro-organisms that enhance the mucins secretion from human intestinal epithelial cells and this in turn prevents the binding of pathogens to the gut surface and facilitates their removal from gut. Furthermore some of these beneficial micro-organisms enhance the integrity of surface lining of the gut by preventing changes in tight junction proteins e.g., occludins and claudins, that plays a role to restrict the enteric pathogenic to invade the epithelial barrier (gut surface layer) [34-38].

Beside that many of these beneficial bacteria produce antimicrobial product (peptide) bacteriocin that inhibits many enteric pathogens (disease causing organism) to cause disease. Whereas lactic acid producing bacteria, a group of beneficial micro-organism, may exhibit additional antimicrobial activity against many enteric pathogens by reducing the pH of microenvironment of gut by its activity on sugars. Beside that some of these beneficial bacteria are reported to enhance antibacterial cationic peptides, known as defensins production in gut. This partly explains the role of these beneficial bacteria controlling the acute infectious enteritis. Some of these beneficial microorganisms reduce the ability of pathogens to cause disease by effecting their gene expression. These beneficial affect both the innate and acquired

immune response. Some beneficial organisms enhance the differentiation of B cells into plasma cells that lead to an increased production of secretory immunoglobulin A (antibodies) that sticks to the outer surface of gut and binds with pathogenic bacteria and prevent their binding to their target sites which is necessary to initiate an infection [17-22,34-39].

Some of these beneficial micro-organisms have ability to activate specific opioid and cannabinoid receptors in the gut causing a relieve in pain and hence can be of additional benefit for patients suffering from chronic inflammatory bowel disease and having visceral pain [40].

It is for these above given reasons, fermented foods are highly recommended to regularly take in diet. The number of viable beneficial micro-organisms may vary from product to product. However, it is generally considered that yogurt has got comparatively higher number of beneficial cells in viable form [41] that can play some role in keeping good health if yogurt is consumed on regular basis. Good quality yogurt is available in market but weight watchers are reluctant to consume it because of its high fat content [42,43].

Low fat content yogurt can be easily prepared at home. Take 1 litre fresh milk having drawn from grass fed animal in glass bowl. Blend it in blender for 1 minute and pour it in a glass bowl to refrigerate it overnight. A creamy layer will appear on the top. Remove the layer carefully with a spoon immediately after taking it out from refrigerator.

Heat the milk upto 45°C. It is the temperature that human body can easily tolerate to touch. Add 6 table spoon of yogurt purchased from open market. Mix it well. Pour it in hot water washed glass jar bottles and close the lid and leave it overnight ideally at 37°C. The earthenware pots are more healthy options to set the yogurt provided they are unglazed but oven baked clay made. If the room temperature is very low the desired temperature can be obtained by keeping airtight sealed bottles in water preheated at 37°C. After 20 hours refrigerate the prepared yogurt until use.

Regular use of home fermented yogurts ensure healthy body with having happy mind [14,15,44-46]. Taking 1 table spoon fermented Cidar and Grape Vinegar mixed with half glass of water having added lemon Juice freshly extracted from one lemon daily ensures active body with prompt and focused thinking.

Conclusion

So far, these days the main approach to address any illness is by administrating the active ingredient-s to suppress the symptoms mainly, though the modes of administration and drug delivery to target site are yet a challenge to meet successfully irrespective of origin of active component in the drug e.g., extracted from Natural Source or otherwise Synthesized by Chemical Procedures that on having administrated the active chemical moieties as drug act as external stimuli [11-13] that can cause adverse effects by shifting metabolism in response to altering cells normal function hence effecting the cells physiology that appears as adverse sign and symptoms e.g., side effects along with bringing the desire effects on the living entity while suppressing the symptoms of disease mainly in most of the cases or otherwise help the body to accelerate the innate remedy procedure to be cured completely at natural pace [2,3,11-13]. Using Nutrifortified Diets and Mixtures though may not be helpful for many emergency situations in a large range of illnesses with having present status of understanding on knowledge but it is found to be exceptionally helpful to cure a wide range of illnesses absolutely without causing any side

effects (adverse effects) in a week or slightly longer time and continuing use of these diets and mixture on daily basis or weekly basis is supportive to ensure healthy body with active and happy mind.

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