



Review Article

Nutrition and Immunity in the Light of Unani Medicine

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A B S T R A C T

Food has always been a basic need of the human being, but it was understood only as a source of energy that is important for their survival. In the history of Medicine, Unani Medicine is one of the very first systems of Medicine which emphasize the importance of food beyond the source of energy. Unani Medicine emphasized food as a source for the maintenance of health and established the notion of *Akhlat* and food as its proximate principle and equilibrium status of different *Akhlat* leads to a healthy condition. Later modern science also established that proper food is necessary for the maintenance of health as malnutrition cause weak immunity and increased incidence of infectious diseases. In the light of recent studies about the relationship of food intake and incidence of infectious diseases, the description of food and its effect on health in classical literature of Unani Medicine becomes more important.

Keywords: Immunity, Nutrition, Unani Medicine, Tabiat, Akhlat

Introduction

In the past, society has been led to believe that apart from supplying essential energy, food has a very little bearing on physical and mental health.¹ With growing realization that human nutrition is a subject far more nuanced and complex than previously appreciated, the reductionist notion of food as nothing more than calories is now in the process of being reconstructed.² The importance of food is a concept that is resonant in all systems of traditional medicine; including the ancient Unani Medicine. Many *Hakeems* (Unani physicians) have discussed the importance of Ghiza (food) in their writings and explained how it might affect the physical and mental health.^{3,4,5,6} The dietary factor may be a 'risk factor' rather than a direct cause, but for some of these diseases, there is sufficient evidence to show that dietary change can appreciably reduce the risk of developing the condition.^{7,8,9} Now, the researches

in nutrition led the notion that nutrition and nutritional status can have profound effects on immune functions, resistance to infection and autoimmunity in man and other animals. Nutrients enhance or depress immune function depending upon the nutrient and its level of intake.¹⁰ Many studies have shown a correlation between nutritional status and morbidity and mortality mostly due to infectious diseases. It was demonstrated that the risk of death from 0.1% in the well-nourished to as much as 18% in severely malnourished infants.¹¹

The Concept of Nutrition and Immunity in Unani Medicine:

The concept of health in Unani Medicine is a multifactorial entity and mainly regulated by many exogenous and endogenous factor. The two most important factors that are mainly responsible for the health of human being are *Mijaz* (Temperament) and *Quwwat-e-Muddabira Badan*,



also called *Tabiat*. *Tabiat* is mainly responsible for the optimum temperament of an individual. As long as optimum temperament is maintained, the health of an individual is maintained.⁴

Relationship between *Mutadil Mijaz* and *Tabiat*

According to Unani Medicine, *Mutadil Mijaz* (Optimum Temperament) is the main cause of health. As long as optimum temperament is maintained, the state of homeostasis in a cell or the body is maintained. The *Mutadil Mejaz* (optimum temperament) is maintained at a different level of body organization. It may be at the cellular or the level of an organ as well as an individual level. It is believed that optimum temperament is maintained as long as equilibrium in quantity and quality of four *Akhlat* (homours) is maintained. This sophisticated equilibrium is controlled and managed by the immunoregulatory mechanism governed by *Quwwat-e-Muddabira Badan*.¹² Ibnesena has called this immunoregulatory mechanism as *Tabiat*.^{3,4}

Tabiyat is defined as the total of structural, functional and psychological characteristics of the human being. According to Hippocrates, there is a special power hidden in every individual called *Quwwat-e-Muddabira Baden* the defensive mechanism of the body.¹³ This *Tabiyat* is the best physician and maintains the health through maintaining the equilibrium of four body *Akhlat* (homours) and in turn maintain the *Mutadil Mijaz*. The well-known Unani Scholar, *Ali bin Rabban Tabri* writes in his book, *Firdousal Hikmat* that:

“*Tabiyat* is regarded as an administrative power of the body and *Tabiyat* accomplishes the function of administration of the body with the help of many powers called *Quwa* of the body like *Quwwate Tabaiyya* (Physical faculty), *Quwwate Haiwania* (Vital faculty) and *Quwwate Nafsania* (Nervous faculty)”. Thus, the primary role of the *Tabiyat* is to provide the general administration as well as defence or immunity to the body.¹⁴

Level of the functioning of the *Quwwat-e- Mudabbira Badan*

Tabiat functions in two ways:

- In normal conditions, it maintains the *Mutadil Mizaj* (Homeostasis) in the internal environment of the body and thus helps in the proper functioning of body systems.
- In the case of a disease, when *Su-e-Mizaj* established in the body, *Tabiat* fights against the disease and *Etadal-e-Mizaj* (homeostasis) is regained.⁴

According to Unani Medical concepts, each cell, tissue, and the entire body is bestowed upon with the power *Tabiat*, which maintain the health through thousands of controlling

systems and mechanism. This power operates under *Quwa Tabiyah*, *Quwa Haywaniyah* and *Quwa Nafsaniyah*. Some of these functions work at the intracellular level, some at the intercellular level and others operate through the entire body to maintain health.⁴

The efficiency of *Quwwat-e-Muddabira Baden* or *Tabiat* may be influenced by many exogenous and endogenous factors like food, physical, psychological stress, hormones, etc. resulting in either immunostimulation or immunosuppression. The maintenance of the health of an individual depends on how *Tabiyat-e-Insaniah* and its relationship with the factors mentioned above are maintained. *Tabiyat-e-Insaniah* governs all the biochemical processes and physiological functions of the body and also maintains *Aetidal Mezaj*.¹⁵

Akhlat and *Mijaz-e-Mutadil*

Mizaj (temperament) is defined as the quality, resulting from the reciprocal action of the four contrary principal qualities (hot/cold/moist/dry) domiciled within the elements (air, water earth, fire). As long as equilibrium in the *Kammiyat* and *Kaifiyat* (quality and quantity) of *Akhlat* is maintained in the cell or body, health will be maintained, and it will continue to function correctly, and this harmonious relationship is controlled by the *Tabiat*, the *Etadal-e-Mizaj*.⁴

There are four *Akhlat* (homours) in the body: blood, phlegm, yellow bile, and black bile, each of which is associated with a pair of qualities, hot and moist, cold and moist, hot and dry, and cold and dry, respectively. In Unani classical literature, *Akhlat* refers to the body fluids which represent entire fluids coming into circulation from various sources. Most of the physiological, as well as pathological processes in the body, have been explained in Unani Medicine in terms of *Akhlat*.^{4,6} Hippocrates (460 B.C.) was the first who has postulated the theory of body fluid and Ibnesena considered *Akhlat* as those fluids which are formed in the liver from the food digested in the stomach. Food after its digestion in the digestive system absorbed through the portal and to some extent, lymphatic channels and reaches in the liver where it is metabolized; from where it circulates in the vessels as *Akhlat*.^{4,6}

There are some factors including age, place, season, diet and occupation, which affect individual temperament and make them prone to diseases. Thus, different people with different social and cultural behaviour having specific temperament predispose to specific kind of diseases in different stages of their life and under different climatic condition.^{4,16}

Nutrition and *Quwwat-e-Mudabbira Badan*

According to Ibn-e-Sena, *Akhlat* is a fluid substance which is the initial product of the digestion of food, and it is

capable of assimilation by and complete integration into the tissue. It is a material of wear and tear of the body. The food items taken by a man starts to digest from the mouth itself. After passing through different digestive processes at a different level of the alimentary canal, *Kailoos* is formed. After absorption from the alimentary canal, it reaches the liver, where it passes through different processes, different types of fluids are formed. These fluids are called *Akhlat* (humour). These *Akhlat* (homours) have their temperaments as blood is hot and wet, phlegm is cold and hot, yellow bile is hot and dry and black bile is cold and dry. These are generated in the liver by the nutrient components of the ingested food and liquids. As long as these *Akhlat* (homours) exist in normal balance, normal quantities and the appropriate region of the body, the humour system will work in the normal way.⁴

Thus, health is a state of the body in which there is equilibrium in the humours, and the body performs its function normally according to its own temperament and the external environment. In the condition of dystemperament, when the equilibrium of the *Akhlat* (homours) is disturbed, and the body functions abnormally. These abnormal functions are not as per with the temperament of the individual and persisting environment; this abnormal condition of the body is known as disease.^{4,17}

Nutrition and Immunity in Recent Advancement

Investigators studying the relationship between the immune system and nutrition have found that nutrition affects immunity and also affects the development of cancer either directly or indirectly via the immune system.^{18,19} Studies conducted in this field indicate that poor populations around the world that suffer from malnutrition are more susceptible to infection than those who receive adequate nutrition.²⁰

Poor Nutrition adversely affects all components of the immune system, including T cell function, other cellular-related killings and the ability of B cells to make antibodies, the functioning of the complement proteins, and phagocytic function. When several of these functions or processes are impaired, the ability of the entire immune system to keep a watchful eye for cancer cells, abnormal cells, or foreign substances and to dispose of them is also markedly impaired.²¹

Conclusion

Now, the role of nutrition in supporting immune function is a well recognized. The Nutritional scientist has long acknowledged the importance of micronutrients, adequate intake of protein and calories in maintaining the body's defence. Prolonged starvation, protein calorie malnutrition in the profound disease states and self-imposed stringent dieting as in anorexia are the causes of loss in the body

defensive capabilities. These affect all aspects of the immune system.

As Unani Medicine relates immunity to the equilibrium condition of humours which constitute the body and act as a building block, this equilibrium condition of humours of the body is maintained by the *Tabiat Mudabbir lil Badan* that is immunity. Thus, Unani Medicine recognizes the concept of immunity strongly, and its concept of immunity is more comprehensive than in modern Medicine. In this way, Unani Medicine may be helpful in better understanding of the phenomenon of Nutrition and Immunity.

Conflict of Interest: None

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