



## THE CONTRIBUTION OF THE FOUNDERS OF MEDICINE TO THE SCIENCE OF HYGIENE AND THE EMPIRICAL DATA THE COLLECTED

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### ABSTRACT

*The persistence and constant movement of toxic chemicals in the environment poses a certain risk to human health. Stable chemicals are dangerous because they are resistant to atmospheric oxygen, light, and microorganisms in soil, water, etc.*

In all progressed countries, one of the most important state task is to care about the protection of human health and increase the ability to work. In order to solve these tasks, i.e. prevention of infirmity, creating a healthy way of living, development of prophylactic measures against observable diseases, organization of preventive measures in the area, awareness of seasonal illness among the population is one of the major issue that facing the medical staff.

It is difficult to preserve body without healthy environment. In this sense, cleanliness studies the positive and negative effects of the natural and social environment on the human body and makes recommendation. And the science of hygiene teaches the importance of maintaining a balance between human well-being and the external environment (picking up working and follow to eating rules, glamorizing residences, etc.).

Since ancient times, people have execute the simplest hygienic measures based on their experiences to carry on their health. Protection from soil pollution, selection and construction of water sources, preparation of food from plant and animal products, eating habits, keeping the body clean, working, resting and sleeping habits, preventing the spread of infectious diseases, isolating patients with infectious diseases, their belongings burning, burying corpses, etc., lived their lives based on their life experiences.

One of the founders of medicine, Hippocrates, was the first to compile empirically collected hygienic data. Hippocrates (460-375 BC), Bucrot, a Greek physician, differentiates external environmental factors (climate, soil, water, human life path, based on the experiences gained due to the laws of the country, etc.) in terms of their influence on physical and mental formation [ 222-223].

After Hippocrates, Abu Ali Ibn Sina, was known in Europe as Avicenna, can be included among the great philosophers who made a great contribution to world culture. In his works,



Ibn Sina substantiates the influence of internal and external environment in the emergence of infectious diseases. He emphasizes that contaminated water has a negative effect on the human body. It is recommended to drink boiled or strained water before drinking. He also mentioned about that in order to prevent diseases, it is necessary to train the body from a young age, keep the body clean, and observe cleanliness.

During the period of feudalism in Western Europe, the science of hygiene, along with all other sciences, was depressed. Due to theological superstitions, unsanitary conditions arise in cities due to the elimination of recommended hygienic measures in Greece and Rome. By the Middle Ages, plague, dysentery, cholera, leprosy, leprosy and other infectious diseases began to spread. By this time, the average life expectancy was 20-23 years, in England at the end of the XIV century it was 17-20 years, in Manchester in the first half of the XIX century, the average life expectancy was 35 years among the well-to-do population, and 18 years among workers. In the same period, the spread of occupational diseases in Italy begin to increase. Italian doctor Bernardino Rammatsini's book entitled "Remarks on the Sickness of the Small Craftsman" was published. The book talks about the origin of occupational diseases and prevention measures due to difficult working conditions.

The inhabitants of Central Asia had information about what kind of animal and vegetable products to eat, how to choose water sources, how to build dwellings in hot climates, and how to dress. In ancient Bukhara, people suffering from infectious sicknesses were separated from the population, placed in separate rooms and required to comply with the rules of personal hygiene. In the city of Kuva (Fergana region), the remains of water pipes made of baked clay were found. The largest mineral wealth was found in the city of Afrosiyab. In this case, the water supply and sewage systems are reminiscent of ancient Roman constructions. These testifies to the importance of sewage in maintaining the health of the people of ancient Central Asia, in maintaining clean water and the sanitary condition of the external environment.

Currently, the tasks facing the science of sanitation are increasing and becoming more tricky. On the one hand, the development of scientific technology provides material well-being by lightening our burden, and allows us to maintain and strengthen health, however, it creates a clear and hidden death trap to health.

These risks are mostly associated with the following aspects of the scientific and technological revolution:

- With changes in working conditions (new power and equipment, high level of noise and vibration - nervous - mental agitations and other negative effects on workers);
- With the rapid progress of the urbanization process, it - leads to the deterioration of sanitary living conditions in cities;
- Atmospheric air pollution with industrial and motor vehicle emissions, noise and accidents on the streets, radio frequency range, electromagnetic radiation, crowded life and residence, distance of workplaces from green areas, growth of low mobility (hypodynamism) with increased weight, etc.;
- As a result of the use of chemicals in industry, agriculture and life, as well as the use of synthetic substances in food products, chemically toxic allergenic, carcinogenic and mutagenic compounds began to pose a threat to the human body;



-Excessive poisoning of the living environment, land, water, air, open water bodies, food products, pesticides and other toxic chemical compounds used in large quantities in agriculture is observed.

Various methods of hygiene inspection are widely used in practical sanitary measures and scientific researches in industrial enterprises, residential catering establishments, etc.:

1. Methods of sanitary inspection related to drawing up proposals for elimination of identified deficiencies and acts with specified deadlines.
2. Methods of laboratory testing. Air, water, soil, food products and other external environmental factors are studied in the science of hygiene and sanitary practice from a physical, chemical, bacteriological, toxicological and radiological point of view.
3. To study and evaluate in laboratory conditions the possible harmful effects of various factors, including chemical and physical factors, on the body by using the experimental method.
4. Method of physiological observations.
5. Method of clinical observation.
6. Statistical method: determines the positive or negative effect of the external environment on health.

On the basis of the received information, the necessary preventive measures are justified and developed. Thus, hygiene studies the impact of human living conditions on health, and one of the most responsible tasks are to justify the hygienic norms of the environment.

Persistence and continuous movement of toxic chemicals in the environment pose some risk to human health. Stable chemicals are dangerous because they are resistant to oxygen in the air, plus, light and microorganisms in soil water, etc. Due to the development of science and technology, the demand for motor vehicles are increasing.

Currently, more than 2,500-3,000 vehicles are moving on crossed streets. The number of cargo and people-carrying transport on rivers and seas are increasing step by step

Therefore, the movement of huge machinery and engines have a negative impact on the environment. 200 million tons of the harmful gases released from carbon dioxide, and the rest of million of tons of gasoline vapors. The flight of one transatlantic airliner destroys 50 tons of oxygen. 220 million tons of harmful factors enter the atmosphere annually. Scientific analysis shows that 40% of toxic substances that pollute the atmosphere come from transport, 20% from various fuels, 15% from the production process, and 25% from other sources. As a result, this situation reduces ozone concentration by 5% and increases radiation by 26%. The SO<sub>2</sub> gas in the air maximized the flow of heat radiation in our universe, causing the glaciers to deliquescent. It can be the reason of level of ocean and sea water to rise by 86 meters [234-235].

The issue of greening is super important in environmental protection, as 40-60% of atmospheric air is cleaned, and 10-15% in winter, as a result of planting trees in three and four rows, and bushes between streets and residential buildings. One of the most considerable aspect of greening ensures the moderation of temperature and air humidity, reduces the force of the wind, reduces street noise, and it may cause pure atmosphere (air, weather and mood).



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