

Causes and Ways of Prevention of Infectious Diseases

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Annotation: This article provides information on the causes of acute infectious diseases and their prevention. Nowadays, there are a number of infectious diseases, and it is very important for us to learn and know about them. An outbreak of any infectious disease causes an epidemic. An epidemic is a widespread spread of infectious diseases in a country, region or country.

Key words: Infectious diseases, microbe, virus, epidemic, epiphytoty, epizootic, whooping cough

Infectious diseases are diseases caused by pathogenic microorganisms (bacteria, viruses, the simplest animals, etc.) entering and multiplying in the human, animal and plant organism and having a harmful effect. Some of the infectious diseases (for example, measles) are transmitted when walking close to the patient, and the term infectious diseases is very suitable for them. Some of the infectious diseases (for example, malaria) are not transmitted through contact when walking close to the patient, so the term infectious diseases is not very appropriate for them. Infectious diseases were also encountered in ancient times. Smallpox, pestilence, cholera and other dangerous and infectious diseases spread widely from time to time, killing millions of people and causing a lot of destruction to the society. The nature of infectious diseases and their causes have been unknown for a long time. The famous scientist and physician of the Middle Ages, Abu Ali Ibn Sina, in his work "Al-Kunon" suspected that the plague, smallpox, measles and other infectious diseases must be caused by invisible animals. Infectious diseases play an important role in people's lives. To date, the number of known and studied infectious diseases on earth is more than 1060. some of these are still widespread from time to time in the form of epidemics, even pandemics.

That is why their harm to people's health and human society in general is very great. The teaching of infectious diseases is closely related to microbiology, epidemiology, parasitology, immunology, experimental chemotherapy and pathological anatomy. Although infectious diseases are caused by pathogenic bacteria, viruses and single-celled simple animals, their emergence cannot be considered only as a result of the fight of microbes against the body. The outbreak of infection is a complex socio-biological process, which depends on the result of the interaction between the microbe and the macroorganism. When a pathogenic bacterium enters the human body,

pathological changes, the process of adaptation and protection occur, that is, an infectious disease develops. A disease does not necessarily develop after a pathogenic microbe enters the body. The relationship between a pathogenic microbe and the human body can be different, depending on the virulence of the microbe on the one hand, and the susceptibility and reactivity of the human body to this disease on the other hand.

Infectious diseases differ from other diseases by the following 4 features:

1. An infectious disease is caused by a living pathogenic microbe.
2. The patient, in turn, becomes a source of the disease and can transmit it to others.
3. When a patient gets sick with an infectious disease, his body develops immunity against that disease and resists the re-infection of this disease.
4. Infectious diseases develop and count with certain periods, that is, cyclically.

In the narrow sense, the word infection means the entry of a microorganism into a macroorganism. The infectious process is a set of physiological and pathological changes occurring in an organism where a pathogenic factor has entered. Infectious disease corresponds to the most intense level of the infectious process and is manifested by various changes and signs that occur in the body. So, for the development of an infectious disease, a pathogenic microbe must first enter the body. When a pathogenic microbe enters the body, the interaction between the microbe and the organism ends with different results.

1. Entered microbes are removed from the body or destroyed by the protective mechanism.
2. The pathogenic microbe finds favorable conditions in the body and settles down. In such cases, a complex relationship begins between two living organisms.

The macroorganism uses its defense mechanisms to take measures to prevent the reproduction and spread of foreign elements, that is, microbes (for example, inflammatory process) Phagocytic elements, antibodies are mobilized. These protective and adaptive reactions of the body continue until the pathogenic microbe completely disappears from the body. The pathogenic microbe tries to protect itself from any opposing forces, starts multiplying rapidly if there are few conditions, adapts against phagocytes (capsules are formed, substances such as aggresin, atifagin, virulin are produced) ability to overcome defense mechanisms and exert its harmful effects is its virulence. A pathogenic microbe rapidly multiplies in the body and overcomes its protective forces and manifests its pathogenic character. The clinical symptoms of the disease are evident when it progresses in a specific form. The following factors in the outbreak of infectious diseases, the amount of pathogenic microbe; and the virulence of the pathogenic microbe, the reactivity of the human body plays a decisive role. Epidemiology is a science that studies the laws of the emergence, development and spread of infectious diseases and develops measures to combat them. The term epidemiology is derived from the Latin word epi-cop, which means the spread of a disease in a population. Depending on the number of people infected with an infectious disease, different types of the epidemiological process are distinguished.

1. People with sporadic diseases are rare.
2. An epidemic is a widespread spread of an infectious disease in a country, region or country.

3. Pandemic - the widespread spread of any infectious disease on an international scale at the same time, i.e. in several countries and continents (for example: cholera, corona virus, flu).
4. Endemic - permanent presence of any infectious disease in a certain area.
5. Enzootic - permanent occurrence of an infectious disease among animals (for example: rodents) living in one place (for example: plague, leishmaniasis)
6. Epizootic - wide spread of an infectious disease among animals.
7. Exotic diseases - infectious diseases brought from abroad.

In order to prevent the further spread of infectious diseases, patients with such diseases or people suspected of having such diseases are isolated in the hospital or at home. Cholera, typhoid fever, paratyphoid fever, dysentery, viral hepatitis, diphtheria, etc. it is necessary to take to the hospital in a special sanitary transport people who have been found or suspected of having diseases. Patients with influenza, measles, whooping cough and some infectious diseases can be isolated at home, provided that they are placed in a separate room, provided with appropriate care and disinfection. In sanatoriums, rest homes, children's health facilities, kindergartens and kindergartens, as well as hospitals for therapy, surgery, pediatrics, etc. Isolators are equipped in the departments (except the infectious department). In particular, it is necessary to isolate people who are close to patients with dangerous infections (toun, cholera) for a period equal to the incubation period of those diseases. In other infectious diseases, patients are isolated for different periods. The main symptoms of infectious diseases are the presence of a special microbe that causes this disease in the patient's body and the possibility of the disease being transmitted from person to person.

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