A susceptible organism in the process of spreading infection

A susceptible individual is a person who lacks any type of immunity or resistance to a particular pathogenic agent that would prevent infection after exposure to that agent.

Many factors determine an individual's susceptibility or resistance to an infectious agent (IA). Infection may not always occur after exposure to a particular IA (eg, due to insufficient infectious dose, unusual gateway, or specific host immunity). The infection may not manifest itself as a disease, or manifest manifestations may occur only under a partial spectrum of characteristic symptoms.

The contagion itself is determined by the properties of both the **agent** *microorganism* and the **susceptibility** of the **individual**. Susceptibility to an infectious agent is determined by a number of factors:

- nature and degree of immune response,
- genetic factors controlling the immune response,
- age at the time of infection,
- nutritional status,
- current other diseases (immune system disorders, metabolic disorders, hormonal and circulatory disorders, serious underlying diseases such as cancer or diabetes),
- abuse (smoking, alcohol, drugs, exertion),
- psychological circumstances (will, faith, optimism, depression),
- infection by several agents at the same time,
- the patient's own microflora.

Defense of the organism

The body's defense against infection consists of three basic mechanisms:

By the term non-specific resistance **we mean innate factors of *physical* (intact epithelium, cilia), *biochemical* (HCl), *genetic*, *hormonal*, "cellular" a.j. all of a sudden.** Innate **(nonspecific)** immunity **includes specialized processes that are *not* associated with the recognition of an etiologic agent (EA) *after previous experience* and operate independently (phagocytosis, complement, lysozyme, interferon).** Acquired **(specific)** immunity **is *conditional on previous contact with EA* or its antigenss (humoral, cellular).**

According to the origin, immunity can be divided into "passive immunity", either "acquired" in a natural way (transplacentally, milk) or "artificially" (immune globulin or gammaglobulin with a short-term effect), and on '*active immunity natural* (after encountering EA), which lasts for varying lengths of time, and *acquired* (after application of vaccines).

'*Collective immunity* is immunity (natural and acquired) in individuals of a certain collective (population). It is the percentage of people who are immune (have antibodies obtained naturally or by vaccination) in a given collective. When a certain percentage is reached - effective collective immunity (85-95%), the transmission of EA stops, epidemics do not occur and cases of the disease are only rare.

Soakness is a measure of natural contact of the population with a certain EA, which induces the formation of specific antibodies, which can be evaluated serologically.

Links

Related Articles

- Contagion Spread Process
- Source of infection
- Transmission of pathogens
- Bloodborne Diseases

References

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