

# Cause of disease

**Cause of disease** (Greek: *aitiā* - cause; *logos* - science) otherwise also epiathogenesis or etiology.

Etiopathogenesis is a description of the onset of a disease including both its cause and etiology as well as other processes that accompany its emergence and development. <sup>[1]</sup>

We refer to the factor that causes the disease as an *etiological factor* - noxa or etiological agent.

We distinguish the causes:

- internal - endogenous,
- external - exogenous,
- or combined.

## Exogenous causes

Exogenous causes of disease can be physical, chemical or biological.

### Physical causes

The physical causes of the disease include, for example, mechanical effects, the effect of temperature changes, ionizing radiation and electric current, or sudden changes in atmospheric pressure.

- **Mechanical influences** - cause injuries or pressure sores.

 For more information see *Injury*.

 For more information see *Decubitus ulcer*.

- **Temperature Changes** - cause burns or conversely Frostbites. Hypothermia or overheating occurs due to the overall effect of abnormal temperature on the organism.

 For more information see *Burn Injury*.

 For more information see *Frostbites*.

- **Ionizing radiation** - causes for example Radiation sickness.

 For more information see *Ionizing radiation*.

 For more information see *Radiation Sickness*.

- **Atmospheric Pressure Changes** - causes caisson sickness or altitude sickness.

 For more information see *Acute Mountain Sickness*.

 For more information see *caisson disease*.



Frostbitten hands

### Chemical influences

- **Chemicals** - such as lyes, acids or poisons (e.g. snakes).

 For more information see *Ingestion of Acids and Alkalies*.

- **Toxic effect** of drugs on the body - causes, for example, hepatotoxicity, nephrotoxicity, neurotoxicity.

 For more information see *Toxicity, nox effects*.

### Biological influences

This group includes all viruses, bacteria or parasites.

## Endogenous causes

The endogenous cause of the disease can arise from the genetic information of the individual, when various *mutations* are applied - for example cystic fibrosis or hemophilia.

They can also represent susceptibility to disease - **predisposition**, such as age, gender or family burden.

## Other types of distribution

Furthermore, the causes of the disease can be divided into somatogenic, psychogenic and others.

- 'Somatogenic (somatic) diseases have a certain organic basis, such as inflammation, tumor or vascular changes.
- **Psychogenic** (psychosomatic) diseases are those for which we cannot find an organic basis. The mutual influence of the mental and physical state is well known, and the significant effect of the psyche has also been shown in a number of diseases. This relationship is noticeable, for example, in bronchial asthma, stomach ulcer, eczema and inflammatory bowel diseases. Asthma attacks provoked by mental stress are known, for example. Therefore, psychotherapy is mainly used in treatment.<sup>[2]</sup>
  
- *Iatrogenic* (Greek: *iatros* – doctor) diseases are diseases caused by a doctor.

 For more information see *Iatrogenic damage*.

If the cause is unknown, we refer to the condition as **idiopathic (essential, cryptogenic)**.

- **Monofactorial** disease arises on the basis of one etiological factor.
- A **multifactorial** disease is one whose occurrence requires the simultaneous action of several main etiological factors. For example, the family burden factor and the exogenous factor – early ischemic heart disease in the family history and smoking.
  
- **Congenital** diseases are caused by factors that act prenatally, such as various teratogens.

 For more information see *Congenital Developmental Defects*.

- Etiological factors acting postnatally cause **acquired** diseases (lat. *acquīrere* - to get).

It is therefore important in which period the etiological factor was active, not when the disease began to manifest itself clinically.

## Links

### Related Articles

- Mutagens and mutagenesis
- Carcinogenesis
- Toxicology Information Center

### References

- GRAY, Jiří. *Compendium of Dentistry*. Prague: Stanislav Juhaňák - Triton, 2016. ISBN 9788073875435..

### References

1. VOKURKA, Martin and Jan HUGO. *The Big Medical Dictionary*. 10th updated edition. Prague: Maxdorf, 2015. Jessenius. ISBN 978-80-7345-456-2
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