

## ICD-10 Version: 2010

- \_ I Certain infectious and parasitic diseases
- \_ II Neoplasms
- \_ III Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
- \_ IV Endocrine, nutritional and metabolic diseases
- \_ V Mental and behavioural disorders
- \_ VI Diseases of the nervous system
- \_ VII Diseases of the eye and adnexa
- \_ VIII Diseases of the ear and mastoid process
- \_ IX Diseases of the circulatory system
- \_ X Diseases of the respiratory system
- \_ XI Diseases of the digestive system
- \_ XII Diseases of the skin and subcutaneous tissue
- \_ XIII Diseases of the musculoskeletal system and connective tissue
- \_ XIV Diseases of the genitourinary system
- \_ XV Pregnancy, childbirth and the puerperium
- \_ XVI Certain conditions originating in the perinatal period
- \_ XVII Congenital malformations, deformations and chromosomal abnormalities
- \_ XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
- \_ XIX Injury, poisoning and certain other consequences of external causes
- \_ XX External causes of morbidity and mortality
- \_ XXI Factors influencing health status and contact with health services

### **Predisposing cause,**

any one of the factors that contribute to susceptibility to a disease by weakening the body's ability to defend itself, such as stress and dietary deficiencies.

**Constitutional cause:** An inherent characteristic of the patient, usually a systemic defect, e.g. protoporphyria.

**Direct cause:** There must be no known variable intervening between the suspect factor and the disease.

**Endogenous cause:** the cause comes from within the patient. See also constitutional cause.

**Exogenous cause:** the cause comes from outside the patient, e.g. a virus infection.

**Indirect cause:** all causes other than the direct cause

**Host cause:** see endogenous cause

**Necessary cause:** a factor which must be present to produce disease; the disease does not occur unless the factor was or is present.

**Precipitating cause:** The trigger mechanism that initiates the commencement of the disease state.

**Predisposing cause:** a mechanism that makes a patient more susceptible to the precipitating cause.

**Primary cause:** The principal factor in causing the disease.

**Secondary cause:** a factor that assists the primary cause. A cause of secondary importance.

**Specific cause:** the single cause in a single cause-single disease relationship.

**Sufficient cause:** a minimal set of conditions and events which inevitably produce disease.

## Definition

Infectious diseases are disorders caused by organisms — such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They're normally harmless or even helpful, but under certain conditions, some organisms may cause disease.

Some infectious diseases can be passed from person to person. Some are transmitted by bites from insects or animals. And others are acquired by ingesting contaminated food or water or being exposed to organisms in the environment.

Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild complaints may respond to rest and home remedies, while some life-threatening infections may require hospitalization. Measles and chickenpox, can be prevented by vaccines. Frequent and thorough hand-washing also helps protect you from infectious diseases.

## Risk factors

While anyone can catch infectious diseases, you may be more likely to get sick if your immune system isn't working properly. This may occur if:

- You're taking steroids or other medications that suppress your immune system, such as anti-rejection drugs for a transplanted organ
- You have HIV or AIDS
- You have certain types of cancer or other disorders that affect your immune system

In addition, certain other medical conditions may predispose you to infection, including implanted medical devices, malnutrition and extremes of age, among others.

## Causes

Infectious diseases can be caused by:

- **Bacteria.** These one-cell organisms are responsible for illnesses, such as strep throat, urinary tract infections and tuberculosis.
- **Viruses.** Even smaller than bacteria, viruses cause a multitude of diseases — ranging from the common cold to AIDS.
- **Fungi.** Many skin diseases, such as ringworm and athlete's foot, are caused by fungi. Other types of fungi can infect your lungs or nervous system.
- **Parasites.** Malaria is caused by a tiny parasite that is transmitted by a mosquito bite. Other parasites may be transmitted to humans from animal feces.

## Direct contact

An easy way to catch most infectious diseases is by coming in contact with a person or animal that has the infection. Three ways infectious diseases can be spread through direct contact are:

- **Person to person.** A common way for infectious diseases to spread is through the direct transfer of bacteria, viruses or other germs from one person to another. This can occur when an individual with the bacterium or virus touches, coughs on or kisses someone who isn't infected.

These germs can also spread through the exchange of body fluids from sexual contact or a blood transfusion. The person who passes the germ may have no symptoms of the disease, but may simply be a carrier.

- **Animal to person.** Being bitten or scratched by an infected animal — even a pet — can make you sick and, in extreme circumstances, can be fatal. Handling animal waste can be hazardous, too. For example, you can acquire a toxoplasmosis infection by scooping your cat's litter box.
- **Mother to unborn child.** A pregnant woman may pass germs that cause infectious diseases to her unborn baby. Some germs can pass through the placenta. Germs in the vagina can be transmitted to the baby during birth.

## **Indirect contact**

Disease-causing organisms also can be passed by indirect contact. Many germs can linger on an inanimate object, such as a tabletop, doorknob or faucet handle.

When you touch a doorknob handled by someone ill with the flu or a cold, for example, you can pick up the germs he or she left behind. If you then touch your eyes, mouth or nose before washing your hands, you may become infected.

## **Insect bites**

Some germs rely on insect carriers — such as mosquitoes, fleas, lice or ticks — to move from host to host. These carriers are known as vectors. Mosquitoes can carry the malaria parasite or West Nile virus, and deer ticks may carry the bacterium that causes Lyme disease.

## **Food contamination**

Another way disease-causing germs can infect you is through contaminated food and water. This mechanism of transmission allows germs to be spread to many people through a single source. *E. coli*, for

example, is a bacterium present in or on certain foods — such as undercooked hamburger or unpasteurized fruit juice.

## Factors in the Emergence of Infectious Diseases

Factor	Examples of specific factors	Examples of diseases
Ecological changes(including those due to economic development and land use)	Agriculture; dams,changes in water ecosystems; deforestation/reforestation; flood/drought; famine; climate changes	Schistosomiasis(dams); Rift Valley fever
Human demographics, behavior	Societal events: Population growth and migration (movement from rural areas to cities); war or civil conflict; urban decay; sexual behavior; intravenous drug use; use of high-density facilities	Introduction of HIV; spread of dengue; spread of HIV and other sexually transmitted diseases
International travel commerce	Worldwide movement of goods and people; air travel	"Airport" malaria; dissemination of mosquito vectors; ratborne hantaviruses; introduction of cholera
Technology and industry	Globalization of food supplies; changes in food processing and packaging; organ or tissue transplantation; drugs causing immunosuppression; widespread use of antibiotics	Hemolytic uremic syndrome( <i>E.coli</i> contamination of hamburger meat), bovine spongiform encephalopathy;transfusion-associated hepatitis (hepatitis B, C), opportunistic infections in immunosuppressed patients, Creutzfeldt-Jakob disease from contaminated batches of human growth hormone (medical technology)
Microbial adaptation and change	Microbial evolution,response to selection in environment	Antibiotic-resistant bacteria, "antigenic drift" in influenza virus
Breakdown in public health measures	Curtailement or reduction in prevention programs; inadequate sanitation and vector control measures	Resurgence of tuberculosis

"Emerging" infectious diseases can be defined as infections that have newly appeared in a population or have existed but are rapidly increasing in incidence or geographic range. Among recent examples are HIV/AIDS, Hantavirus pulmonary syndrome, Lyme disease, and hemolytic uremic syndrome (a food borne infection caused by certain strains of *Escherichia coli*). Specific factors precipitating disease emergence can be identified in virtually all cases. These include ecological, environmental, or demographic factors that place people at increased contact with a previously unfamiliar microbe or its natural host or promote dissemination. These factors are increasing in prevalence; this increase, together with the ongoing evolution of viral and microbial variants and selection for drug resistance, suggests that infections will continue to emerge and probably increase and emphasizes the urgent need for effective surveillance and control.