

20 Deadly Diseases

1. Diphtheria

A serious infection of the nose and throat that's easily preventable by a vaccine. A sheet of thick, grey matter covers the back of the throat, making breathing hard. Symptoms include sore throat, fever, swollen lymph nodes and weakness. Treatments include antibiotics and an antitoxin that neutralizes the diphtheria toxin.

Causal agent	Bacterium <i>Corynebacterium diphtheriae</i>
Transmission	Respiratory route and direct contact
Symptoms	Weakness, sore throat, fever, swollen neck glands, thick grey coating in the throat or nose
Incidence and deaths	Around 5,000 cases a year worldwide. Fatal in 5–10 per cent of cases.
Prevalence	Endemic in many countries in Asia, the South Pacific, the Middle East, Eastern Europe and in Haiti and the Dominican Republic. Rare in industrialised countries.
Prevention	Vaccination
Treatment	Antitoxins and antibiotics
Global strategy	Childhood vaccination programmes but the World Health Organization (WHO) describes diphtheria as a 'forgotten' disease

2. Influenza

Influenza is a highly infectious disease that affects the respiratory (breathing) tract. It is also known as the flu or grippé. The disease is caused by a virus. When inhaled, the virus attacks cells in the upper part of the respiratory system and causes symptoms such as fatigue, fever and chills, a hacking cough, and body aches.

Influenza can also lead to other, more serious infections. The disease known as stomach flu is not really a form of influenza. The influenza virus normally does not attack the stomach or intestines. Stomach flu is instead caused by other organisms, such as the salmonella or E. coli bacteria.

The flu is often confused with the common cold, but it is actually much more serious. Influenza is caused by the transmission of a flu virus from an infected person to an uninfected person. The virus can be transmitted by sneezing, coughing, sharing of eating and drinking utensils, and direct contact.

Causal agent	Several strains of virus, with new strains emerging
Transmission	Mainly respiratory but also through contact with objects or surfaces
Symptoms	Fever, cough, sore throat, runny nose, muscle aches, headaches, fatigue
Incidence and deaths	Up to 650,000 deaths a year worldwide from respiratory diseases linked to seasonal flu
Prevalence	Worldwide, with the constant risk of a new pandemic
Prevention	Vaccination, but not always effective and protection is short lived. Infected cases isolated if detected early on. Advice for general population on avoiding infection during an outbreak.
Treatment	Antiviral drugs
Global strategy	Multi-factored, including surveillance to detect first signs of an epidemic and rapid response to contain it

3. Leprosy

A chronic, curable infectious disease mainly causing skin lesions and nerve damage. Leprosy is caused by infection with the bacterium *Mycobacterium leprae*. It mainly affects the skin, eyes, nose and peripheral nerves. Symptoms include light-coloured or red skin patches with reduced sensation, numbness and weakness in hands and feet. Leprosy can be cured with 6-12 months of multi-drug therapy.

Causal agent	Bacterium <i>Mycobacterium leprae</i>
Transmission	Long thought to be through direct contact with a patient but respiratory route now believed more likely
Symptoms	Skin nodules, ulcers, thick, dry or stiff skin, loss of eyebrows and eyelashes, numbness, muscle weakness and eye problems
Incidence	Around 250,000 people diagnosed in 2017
Prevalence	Endemic in some parts of the world, mostly Africa and Asia
Prevention	No vaccine but the infection is hard to catch
Treatment	Combination of antibiotic drugs
Global strategy	The World Health Organization (WHO) goal is to eradicate the disease, with a target of zero new infections in children by 2020. Key interventions include early detection of cases and better quality of, and access to, healthcare for marginalised populations.

4. Measles

Measles is a viral infection (an infection caused by a virus). Its most characteristic feature is a reddish skin rash. Measles is also known as rubeola, five-day measles, or hard measles.

Measles infections occur throughout the world. At one time, they reappeared in two- or three-year cycles, usually in the winter and spring.

Today, there is a very effective measles vaccine. This vaccine has greatly reduced the occurrence of measles in many parts of the world. Babies up to the age of eight months usually do not get measles.

They receive special cells from their mothers that protect them against the disease. A person who has had measles will never get the disease again.

Causal agent	Virus of the type paramyxovirus
Transmission	Respiratory, highly contagious
Symptoms	Fever, runny nose, cough, red eyes and sore throat, followed by a rash over whole body
Incidence and deaths	Estimated 90,000 deaths in 2016
Prevalence	Worldwide
Prevention	Vaccination with the combined measles, mumps and rubella (MMR) vaccine
Treatment	No specific treatment for the virus but drugs for symptoms such as fever and muscle pain
Global strategy	World Health Organization Global Vaccine Action Plan (GVAP) has a goal of eliminating measles by or before 2020

5. Scarlet Fever

A bacterial illness that develops in some people who have strep throat. Scarlet fever is most common in children from five to fifteen years of age. Symptoms include a bright-red rash that covers most of the body, a sore throat and a high fever.

Causal agent	Bacterium from the streptococcus group, usually streptococcus A
Transmission	Respiratory and through contact with infected items such as towels and bed linen
Symptoms	Sore throat, fever and distinctive red skin rash
Incidence and deaths	No global figures but largely eliminated as a major killer
Prevalence	Recent upsurges in cases in some countries including England
Prevention	Precautions when in contact with an infected person
Treatment	Antibiotics as well as drugs to reduce the fever

6. SARS

A contagious and sometimes fatal respiratory illness caused by a [coronavirus](#). SARS appeared in 2002 in China. It spread worldwide within a few months, although it was quickly contained. SARS is a virus transmitted through droplets that enter the air when someone with the disease coughs, sneezes or talks. No known transmission has occurred since 2004. Fever, dry cough, headache, muscle aches and difficulty breathing are symptoms. No treatment exists except supportive care.

Causal agent	Severe acute respiratory syndrome coronavirus or SARS-CoV
Transmission	Not completely understood but thought to be through close contact with an infected person, mainly through the respiratory route, and also through contact with infected surfaces
Symptoms	Influenza-like, including fever, malaise, myalgia, headache, diarrhoea and shivering
Incidence	No reports of SARS since 2004, as of mid-2018
Prevalence	Currently no cases reported but potential to break out and spread worldwide
Prevention	Fast reporting of new outbreaks, isolation of infected individuals and contacts
Treatment	No specific treatment but general antiviral drugs and treatment to support breathing, prevent or treat pneumonia and reduce swelling in the lungs
Global strategy	Worldwide surveillance to detect new outbreaks, fast reporting of cases and containment

7. Smallpox

An eradicated virus that used to be contagious, disfiguring and often deadly. Naturally occurring smallpox was destroyed worldwide by 1980. In addition to flu-like symptoms, patients also experience a rash that appears first on the face, hands and forearms and then later appears on the torso. There's no treatment or cure for smallpox.

Causal agent	Virus of the orthopoxvirus genus
Transmission	Respiratory route and also through pus from the rash of an infected person
Symptoms	High fever and pustular rash that left permanent scars
Prevalence	Eradicated in 1979; so far the only human infectious disease to be so
Prevention	Vaccination was highly effective
Treatment	There was no proven treatment but some antiviral drugs were thought to have had some benefit

8. Tuberculosis (TB)

A potentially serious infectious bacterial disease that mainly affects the lungs. The bacteria that cause TB are spread when an infected person coughs or sneezes. Most people infected with the bacteria that cause tuberculosis don't have symptoms. When symptoms do occur, they usually include a cough (sometimes blood-tinged), weight loss, night sweats and fever. Treatment isn't always required for those without symptoms. Patients with active symptoms will require a long course of treatment involving multiple antibiotics.

Causal agent	Bacterium <i>Mycobacterium tuberculosis</i>
Transmission	Respiratory route
Symptoms	Active lung TB: cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats
Incidence and deaths	6.3 million new cases reported and 1.8 million deaths in 2016
Prevalence	Worldwide but vast majority of deaths are in developing countries, with seven including India, Pakistan and Nigeria accounting for over 60 per cent of the total
Prevention	Vaccination
Treatment	Antibiotics but drug-resistance is growing
Global strategy	The World Health Organization (WHO) aims to reduce deaths by 90 per cent and incidence by 80 per cent by 2030 which, the WHO says, requires universal health care and social protection for people in 'epidemic' countries

9. Cholera

A bacterial disease causing severe diarrhoea and dehydration, usually spread in water. Cholera is fatal if not treated right away. Key symptoms are diarrhoea and dehydration. Rarely, shock and seizures may occur in severe cases. Treatment includes rehydration, IV fluids and antibiotics.

Causal agent	The bacterium <i>Vibrio cholera</i>
Transmission	Predominately waterborne
Symptoms	Severe diarrhoea, nausea, vomiting, stomach cramps, muscle spasms
Incidence and deaths	Estimated 1.3 million to 4.0 million cases and 21,000 to 143,000 deaths worldwide.
Prevalence	In 2016, major epidemics struck Haiti, the Democratic Republic of Congo, Somalia, the United Republic of Tanzania and Yemen. Virtually non-existent in developed countries
Prevention	Provision of clean drinking water and efficient sewers; oral vaccines in high-risk areas
Treatment	Oral rehydration in mild cases; rapid treatment with intravenous fluids and antibiotics in severe cases
Global strategy	The World Health Organization (WHO) aims to reduce cholera deaths by 90 per cent by 2030. Strategy includes: specialist treatment centres and better access to clean water, effective sanitation and waste management; good hygiene and food safety practices; and public information.

10. Dysentery

Inflammation of the intestines accompanied by bloody diarrhoea. Dysentery is most often caused by shigella bacteria (shigellosis) or an amoeba. Dysentery is often spread through contaminated food or water. A key symptom is bloody diarrhoea. There may also be abdominal pain, cramps, fever and malaise. Prompt medical care is required for bloody diarrhoea. Treatment may include increased fluid intake, rehydration solutions, IV fluids and antibiotics.

Causal agents	Bacillary dysentery (shigellosis), the <i>Shigella</i> genus of bacteria, Amoebic dysentery (amoebiasis), single-cell parasite, the <i>Entamoeba histolytica</i>
Transmission	Mainly contaminated food or water but also from one individual to another through infected faeces
Symptoms	Mainly watery diarrhoea flecked with blood, mucus or pus. Other symptoms include fever and chills, abdominal pain and weight loss.
Incidence	Shigellosis is responsible for an estimated 165 million cases of severe dysentery a year
Prevalence	Shigellosis and amoebiasis are endemic throughout the world
Prevention	Clean water, good sanitation and good hygiene practices, particularly hand-washing
Treatment	Antibiotics for shigellosis and antiparasitic drugs for amoebiasis. Rehydration to replace fluids and body salts lost through diarrhoea.
Global strategy	Provision of clean water, efficient sanitation and promotion of good hygiene practices

11. Typhoid

Typhoid fever is an infection that spreads through contaminated food and water. Vaccines are recommended in areas where typhoid fever is common. Symptoms include high fever, headache, stomach pain, weakness, vomiting and loose stools. Treatment includes antibiotics and fluids.

Causal agent	Bacterium Salmonella Typhi
Transmission	Contaminated food and water
Symptoms	Fever, fatigue, headache, nausea, abdominal pain, constipation or diarrhoea and sometimes a rash
Incidence and deaths	Estimated 11–20 million cases and 128,000–161,000 deaths a year worldwide
Prevalence	Global but mainly parts of Africa, the Americas, Southeast Asia and the Western Pacific
Prevention	Vaccination; provision of clean water, good sanitation and food hygiene
Treatment	Antibiotics but drug resistance is growing
Global strategy	US\$85 million funding made available from 2019 for routine vaccination of children in countries where typhoid is endemic

12. Malaria

Malaria is a serious, infectious disease spread by certain kinds of mosquitoes. It is common in tropical climates and is characterized by chills, fevers, and an enlarged spleen.

These symptoms reappear again and again. The disease can be treated with medication, but it tends to come back even after being cured. Malaria is endemic in many developing countries.

An endemic disease is one that occurs frequently in a particular location. Isolated, limited outbreaks of malaria sometimes occur in the United States.

Causal agent	Species of the parasite plasmodium
Transmission	Bite from an infected female anopheline mosquito
Symptoms	Flu-like: malaise, fever, headache, sweats, chills, vomiting. Can include muscle pain and diarrhoea.
Incidence and deaths	216 million cases worldwide and 445,000 deaths in 2016
Prevalence	Found in more than 100 countries including large areas of Africa, Asia, Central and South America
Prevention	Drugs and environmental measures, including mass distribution of mosquito nets treated with insecticide
Treatment	Choice of drugs, depending on factors such as the type of parasite and the area where the infection was acquired
Global strategy	Prevention both environmental and drugs combined with fast diagnosis, treatment and surveillance. Goal of reducing incidence and mortality by at least 90 per cent by 2030.

13. Plague

A rare but serious bacterial infection that's transmitted by fleas. The bubonic plague is caused by the bacteria *Yersinia pestis*. It can spread through contact with infected fleas.

Symptoms include swollen lymph nodes, which can be as large as chicken eggs, in the groin, armpit or neck. They may be tender and warm. Others include fever, chills, headache, fatigue and muscle aches. Bubonic plague requires urgent hospital treatment with strong antibiotics.

Causal agent	Bacterium <i>Yersinia pestis</i>
Transmission	From rodents to humans by flea bite. Also person to person through respiratory route or direct contact with infected tissue.
Symptoms	Fever, chills, head and body aches, and weakness, vomiting and nausea. In bubonic plague – the most common type – painful swollen lymph nodes that can turn into pus-filled open sores.
Incidence and deaths	3,248 cases and 584 deaths worldwide in 2010–15. Case-fatality ratio of 30 to 60 per cent for bubonic plague. Pneumonic, second most common type, is invariably fatal if untreated.
Prevalence	Endemic in many rural areas in the Americas, Africa and Asia but mostly in the Democratic Republic of the Congo, Madagascar and Peru
Prevention	Destruction of rodent habitats and use of insecticides where the disease is endemic
Treatment	Antibiotics along with oxygen therapy and intravenous fluids
Global strategy	Surveillance of at-risk areas and fast response to contain outbreaks

14. Typhus

Typhus, also known as typhus fever, is a group of infectious diseases that include epidemic typhus, scrub typhus, and murine typhus. Common symptoms include fever, headache, and a rash.

Typically these begin one to two weeks after exposure. The diseases are caused by specific types of bacterial infection.

Causal agent	The Rickettsia prowazekii, a type of bacteria
Transmission	By the human body louse, <i>Pediculus humanus corporis</i>
Symptoms	Headache, chill, prostration, high fever, coughing and severe muscle pain, followed by a dark spot on the upper trunk, spreading to the entire body excepting, usually, the face, palms and soles of the feet
Incidence	Since the Second World War most reported outbreaks have been in Burundi, Ethiopia and Rwanda. 20,000 cases in Burundi in 1997
Prevalence	Colder regions of Central and Eastern Africa, central and South America, and Asia, where there is overcrowding and poor hygiene, such as in prisons and refugee camps
Prevention	General cleanliness and use of insecticides in cases of louse infestation
Treatment	One dose of an antibiotic

15. Yellow fever

A viral infection spread by a particular species of mosquito. Yellow fever is spread by a species of mosquito common to areas of Africa and South America. Vaccination is recommended before traveling to certain areas. Mild cases cause fever, headache, nausea and vomiting. Serious cases may cause fatal heart, liver and kidney conditions.

No specific treatment for the disease exists. Efforts focus on managing symptoms and limiting complications.

Causal agent	Virus belonging to the genus <i>Flavivirus</i>
Transmission	Infected mosquitoes
Symptoms	Fever, headache, jaundice, muscle pain, nausea, vomiting and fatigue
Prevalence	Found in tropical and sub-tropical parts of Africa and South America
Incidence and deaths	Not known. One estimate is 84,000–170,000 severe cases and 29,000–60,000 deaths in 2013 but number of cases thought to be hugely under-reported.
Prevention	Vaccination
Treatment	No specific treatment but symptoms treated with drugs
Global strategy	The World Health Organization (WHO) aims to eliminate yellow fever by 2026 through measures including affordable vaccines for at-risk populations and containing outbreaks fast

16. Zika

A disease caused by Zika virus that is spread through mosquito bites. In most cases, there are no symptoms. In a few cases, Zika can trigger paralysis (Guillain-Barré Syndrome). In pregnant women, it may cause subsequent birth defects. When present, symptoms are mild and last less than a week. They include fever, rash, joint pain and red eyes.

There's no vaccine or specific treatment. Instead, the focus is on relieving symptoms and includes rest, rehydration and acetaminophen for fever and pain. Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen should be avoided.

Causal agent	Zika virus
Transmission	Mainly bite from infected mosquito but also person to person through sexual contact
Symptoms	Include fever, skin rash, conjunctivitis, muscle and joint pain, malaise, headache. The virus can trigger the neurological disorder Guillain-Barré syndrome and in pregnant women can lead to microcephaly in the child.
Prevalence	Parts of Africa, Asia, the Caribbean, South and Central America, Mexico and the Pacific Islands
Prevention	Avoidance of mosquito bites and of sexual transmission. Use of insecticides during outbreaks.
Treatment	No treatment for the virus but symptoms are treated with drugs
Global strategy	Surveillance in endemic areas to ensure fast detection of cases and containment of outbreaks. Destruction of mosquito breeding sites and reduction of contact with mosquitoes.

17. Polio

A virus that may cause paralysis and is easily preventable by the polio vaccine. Polio is transmitted through contaminated water or food, or contact with an infected person.

Many people who are infected with the poliovirus don't become sick and have no symptoms. However, those who do become ill develop paralysis, which can sometimes be fatal. Treatment includes bed rest, pain relievers and portable ventilators.

Causal agent	Three strains of wild polio virus but type 2 now eliminated
Transmission	Person to person via the oral-faecal route
Symptoms	Usually symptomless but symptoms include stiffness in the neck and back, abnormal reflexes and difficulty swallowing and breathing. In rare cases leads to paralysis
Incidence and deaths	22 reported cases in 2017
Prevalence	Only endemic now in Nigeria, Pakistan and Afghanistan
Prevention	Vaccination
Treatment	No treatment for the virus but symptoms relieved with a range of drugs and therapies.
Global strategy	Mass vaccination of children. In 2017, the World Health Organization (WHO) believed the complete eradication of polio was well within our grasp

18. Ebola

A virus that causes severe bleeding, organ failure and can lead to death. Humans may spread the virus to other humans through contact with bodily fluids such as blood. Initial symptoms include fever, headache, muscle pain and chills. Later, a person may experience internal bleeding resulting in vomiting or coughing blood.

Treatment is supportive hospital care.

Causal agent	The ebola virus. Five species identified so far.
Transmission	Transmitted to humans by wild animals, then spreads from person to person through body fluids
Symptoms	Fever, severe headache, muscle pain, weakness, fatigue, diarrhoea, vomiting, abdominal pain, haemorrhaging
Incidence and deaths	28,616 cases in the 2014–16 epidemic and 11,310 deaths. Average case fatality rate is around 50 per cent.
Prevalence	Two isolated outbreaks in the Democratic Republic of the Congo since the global pandemic of 2014–16
Prevention	In affected areas, avoid contact with: body fluids; infected medical equipment and bedding, and bats and non-human primates and bush meat from these animals
Treatment	No proven treatment but treatments for different symptoms and support to maintain the body's functions
Global strategy	Fast containment of outbreaks combined with health education for health workers and general population

19. HIV and AIDS

AIDS is the abbreviation for acquired immune deficiency syndrome. The disease is caused by a virus known as the human immunodeficiency virus, or HIV. The disease was first recognized in the United States in 1981.

A person can be infected with HIV without developing AIDS. The virus can remain in a person's body for many years without causing serious health problems. During this period, the virus is said to be latent, or inactive.

Eventually, however, most people who are infected with HIV do develop AIDS. Treatment of HIV patients involves trying to slow or stop the virus from spreading in the body's cells and treating or preventing diseases that develop when a person's immune system has been damaged by the virus.

AIDS develops when HIV attacks and destroys certain types of cells that are part of the immune system. The immune system consists of all those cells, tissues, and substances that protect the body from infection by foreign bodies, such as bacteria.

An important element of the immune system is a group of white blood cells that include helper T cells, macrophages, and monocytes. These cells attack foreign bodies and prevent them from causing disease and infection.

Causal agent	Human immunodeficiency virus (HIV), which exposes the body to a range of conditions, known as acquired immunodeficiency syndrome, or AIDS
Transmission	Anal and vaginal sex and sharing needles and syringes. Less common: mother to child transmission during pregnancy, childbirth or breastfeeding.
Symptoms	Flu-like symptoms. In later stages, symptoms from a range of conditions, including pneumonia.
Deaths	By the end of 2016, HIV and AIDS had killed more than thirty-five million people
Prevalence	Worldwide but the vast majority of cases and deaths are in sub-Saharan Africa
Prevention	Medication (pre-exposure prophylaxis or PrEP) for people at high risk; 'safe sex' practices and needle exchange programmes for intravenous drug users
Treatment	Combination drugs, known as antiretroviral therapy or HAART
Global strategy	Health education to reduce risk-taking behaviours, preventive medication for those at high risk and making anti-retroviral therapy available in the developing world

20. Syphilis

A bacterial infection usually spread by sexual contact that starts as a painless sore. Syphilis develops in stages and symptoms vary with each stage. The first stage involves a painless sore on the genitals, rectum or mouth.

After the initial sore heals, the second stage is characterized by a rash. Then, there are no symptoms until the final stage which may occur years later. This final stage can result in damage to the brain, nerves, eyes or heart. Syphilis is treated with penicillin. Sexual partners should also be treated.

Causal agent	Bacterium Treponema pallidum
Transmission	Person to person through sexual contact
Symptoms	A sore followed by skin rash and inflammation of the mucous membranes and lymph glands. A few cases eventually progress to tertiary syphilis, which attacks bones, tissues, the central nervous system, the cardiovascular system and the brain.
Prevalence	Worldwide. Was close to eradication in the US but is now on the rise again.
Prevention	'Safe sex' practices
Treatment	Antibiotics
Global strategy	Health education, regular screening of those at high risk and fast treatment

Reference – <https://healthhyme.com/20-deadly-diseases-you-need-to-know/>
