

DISEASE CHART

CLASSIFICATION	TRANSMISSION	EXAMPLES	WAYS TO PREVENT
Water - Borne	The consumption of feces-contaminated water	Cholera Typhoid fever Paratyphoid fever Bacillary dysentery Amebic dysentery Salmonellas Giardiasis Hepatitis A (jaundice) Guinea worm	-Improve quality of drinking water -Prevent casual use of other unimproved sources -Improve sanitation
Water- Washed (water scarce)	Anal –oral or skin to skin direct contact. Resulting from poor personal cleanliness and hygiene caused from lack of water for sufficient, washing, bathing, and cleaning	Shigellosis Salmonellosis Enteroviruses (viral diarrhea) Trachoma Conjunctibitis (Pinkeye) Scabies (itch)	-Improve water quantity -Improve accessibility and reliability of domestic water supply -Improve hygiene -Improve sanitation
Water Contact	The pathogen spends part of it's life cycle in an animal that lives in water (ex. Snail). The pathogen is transmitted by ingetion or by penetration of the skin	Blood fluke (Schistomsomiasis) Guinea worm	-Decrease infected water contact Control vector host populations -Improve quality of the water (some types) -Improve sanitation (some types)
Water Related (Insect Vectors)	Transmitted by insects which breed in or near water. The insect becomes infected by the disease and is transmitted to humans by the insect biting the human, thus contracting the disease to the human.	Yellow fever Malaria Filarial fever Sleeping sickness (trypanosomiasis) River blindness (Onchocerciasis)	-Improve surface water management -Destroy insects breeding sites -Decrease need to visit the breeding sites of insects -Use mosquito netting -Use insecticides
Sanitation Related	Fecally contaminated soil. Thus, when the soil is contaminated the larvae becomes infective and are transmitted from contaminated hands or vegetables, or can penetrate the skin that comes in contact with the infective soil.	Hookworm (ancylostomiasis) Roundworm (ascarlasis)	-Wash hands before eating -Use of sanitary latrines -Not using fresh feces for fertilizer

Descriptions of some diseases discussed on previous chart

Amebic dysentery - is prevalent in regions where human excrement is used as fertilizer.

Shistosomiasis (Blood Fluke) - the larvae of the parasite are harbored by snails, which serve as intermediate hosts, and infect humans who bathe in or otherwise come in contact with infested waters. The larvae enter through the skin, migrate via the blood vessels, and mature in the lungs. From there they travel to the veins of the upper or lower intestine or bladder and reproduce. Some eggs pass out in the feces. Others are carried into the liver, where the body surrounds them with white blood cells, forming hundreds of tiny ball-like granulomas that eventually impair the liver's ability to function. The disease is characterized by a skin eruption at the site of entry, fever, diarrhea, and other symptoms, depending on the tissues affected; cirrhosis of the liver is common

Cholera - acute infectious disease caused by strains of the bacterium *Vibrio cholerae* that have been infected by **bacteriophages**. The bacteria, which are found in fecal-contaminated food and water and in raw or undercooked seafood, produce a **toxin** that affects the intestines causing diarrhea, vomiting, and severe fluid and electrolyte loss. Cholera has a short incubation period (two or three days) and runs a quick course.

Giardiasis - is spread via the fecal-oral route, most commonly by eating food contaminated by the unwashed hands of an infected person or by drinking groundwater polluted by the feces of infected animals such as dogs and beavers (hence the nickname "beaver fever"). It attaches itself to the walls of the small intestine and there multiplies quickly. About two thirds of infected individuals develop no symptoms. Symptoms, when present, occur one to three days after infection and consist of diarrhea, flatulence, and abdominal cramps, often accompanied by weight loss.

Hepatitis

Hepatitis A, also called infectious hepatitis, occurs sporadically or in epidemics, the virus being present in feces and transmittable via contaminated food (e.g., food prepared by an infected person with unwashed hands or fresh food washed or grown with contaminated water) or water. A person with active infection can spread it by physical contact. The disease usually resolves on its own.

Hepatitis B, also called serum hepatitis, was commonly transmitted through blood transfusions until the 1970s, when screening tests were introduced. Intravenous-drug abusers remain a high-risk group because of the sharing of needles. It is also spread by sexual transmission and from mother to baby at birth. Some infected individuals, particularly children, become chronic carriers of the virus. Hepatitis B can progress to chronic liver disease and is associated with an increased risk of developing liver cancer. A vaccine, available since 1981, is recommended for all infants and others at risk for the virus. Alpha-interferon was approved as a treatment in 1992.

Hepatitis C, formerly called non-A, non-B hepatitis, is also transmitted by contaminated blood transfusions and by sharing of needles among drug abusers, although in many cases no source can be identified. It is the most common form of chronic liver disease in the United States. Many of those infected have no symptoms but become carriers, and the virus may eventually cause liver damage. Blood banks routinely screen for hepatitis C. Alpha-interferon is used also to treat hepatitis C, in combination with the drug ribavirin.

Hepatitis D, or delta hepatitis, affects only people with hepatitis B; those infected with both viruses tend to have more severe symptoms.

Hepatitis E is spread by consuming feces-contaminated food or water. It is common in Mexico, Africa, and Asia and is especially serious in pregnant women.

Hepatitis can be incurred as a complication of several other disorders in addition to viral infection, among them amebic **dysentery**, **cirrhosis** of the liver, and **mononucleosis**. Also, alcohol, carbon tetrachloride, some tranquilizers and antibiotics, and many other substances can produce a toxic reaction in the liver, resulting in toxic hepatitis.

Polio - the virus enters the body by way of the mouth, invades the bloodstream, and may be carried to the central nervous system, where it causes lesions of the gray matter of the spinal cord and brain. The illness begins with fever, headache, stiff neck and back, and muscle pain and tenderness. If there is involvement of the central nervous system, paralysis ensues.

Salmonellosis - any of a group of infectious diseases caused by intestinal bacteria of the genus *Salmonella*, including **typhoid fever**, paratyphoid fever, blood poisoning, and food poisoning (gastroenteritis). Typhoid fever, caused by *S. typhi*, is spread by fecal contamination of water or milk or by food handlers who are carriers. It is characterized by a high fever and a rash on the chest and abdomen and can be fatal. Paratyphoid fever, caused by *S. paratyphi*, is also spread in the feces of victims or carriers. Outbreaks often occur where adequate hygiene, especially in food preparers, is not practiced. Paratyphoid is characterized by mild fever and a rash on the chest.

Scabies - highly contagious parasitic skin disease caused by the itch mite (*Sarcoptes scabiei*). The disease is also known as itch. It is acquired through close contact with an infested individual or contaminated clothing and is most prevalent among those living in crowded and unhygienic conditions. The female mite burrows her way into the skin, depositing eggs along the tunnel. The larvae hatch in several days and find their way into the hair follicles. Itching is most intense at night because of the nocturnal activity of the parasites. Aside from the burrows, which are usually clearly visible, there are a variety of skin lesions, many of them brought on by scratching and infection.

Trachoma - infection of the mucous membrane of the eyelids caused by the bacterium *Chlamydia trachomatis*. Trachoma is highly contagious in its early stages and is transmitted by direct contact with infected persons or articles (e.g., towels, handkerchiefs) and possibly also by flies. It begins as congestion and swelling of the eyelids with tearing and disturbance of vision. The cornea is often involved. If left untreated, scar tissue forms, which causes deformities of the eyelids and, if there is corneal involvement, partial or total blindness.

Typhoid fever - acute, generalized infection caused by *Salmonella typhi*. The main sources of infection are contaminated water or milk and, especially in urban communities, food handlers who are carriers. The symptoms of typhoid appear 10 to 14 days after infection; they include high fever, rose-colored spots on the abdomen and chest, diarrhea or constipation, and enlargement of the spleen. Complications, especially in untreated patients, may be numerous, affecting practically every body system, and they account for the mortality rate of 7% to 14%. Perforation of the intestine with hemorrhage is not uncommon.