

# METHODS OF DISEASE TRANSMISSION

There are many ways that diseases can be passed from person to person, and some diseases can be transmitted in more than one way. Sometimes transmission involves direct contact with an infected person, while other times it only requires being near an infected person. Some diseases are not even spread through contact with people at all, but through contact with animals.

## DIRECT

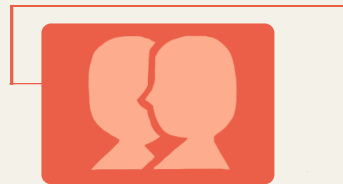
Direct transmission means that the disease is passed directly from one infected person or animal to another person or animal.

## INDIRECT

Indirect transmission occurs when a disease is passed from an infected person to another person, even though the two people have not had direct contact.

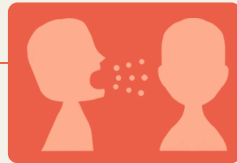
## VECTOR

Vector transmission requires another organism to transmit a disease from person to person or from animal to person. This is a type of zoonotic (animal to person) transmission, but differs from direct zoonosis, in which a vertebrate animal contracts a disease and passes it directly to a person, as with rabies.



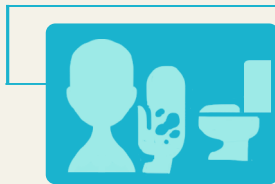
### 1. PERSON-TO-PERSON

Person-to-person transmission can occur anytime an infected person touches or exchanges body fluids with another person. For example, kissing can be one method of person-to-person transmission. A pregnant mother can also pass a disease on to her unborn child.



### 2. DROPLET

Some diseases are spread by coughing or sneezing, which can cause droplets containing the infectious agent to land on nearby people.



### 3. FECAL-ORAL

Fecal-oral transmission occurs when feces—often microscopic amounts—are transmitted from an infected person or animal to another person by mouth. This can happen if food workers use the restroom but do not adequately wash their hands before preparing food for customers to eat.



### 4. AIRBORNE

Sometimes, an infectious agent enters the air when an infected person sneezes, coughs, laughs—or even just breathes—and it can remain in the air for an extended period of time. When another person comes into contact with the agent, this can lead to airborne transmission.



### 5. FOMITES

A fomite is an inanimate object that serves as a vehicle to pass an infectious disease from an infected person to a healthy person. For example, a water fountain might become contaminated by the saliva of an infected person and pass that disease on to another person who drinks from it. Other examples of potential fomites include doorknobs, handrails, and shared computer keyboards.



### 6. INSECT BITE

Vector-borne diseases are most commonly transmitted by insect bites. For example, mosquitoes acquire malaria parasites by feeding on infected humans and then transfer that infection to other people when they feed again. The plague, which killed tens of millions of Europeans in the fourteenth century, was transmitted from rats to humans through flea bites.

## Typical Transmission Methods of Various Pathogens



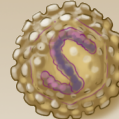
HIV

1.



Tuberculosis

2.

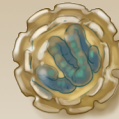


Chickenpox

1.

2.

5.



Zika

1.

6.



Lyme disease

6.



Ebola

1.

2.

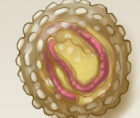
5.



MRSA

1.

5.



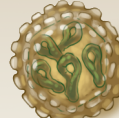
Measles

1.

2.

4.

5.



Influenza

1.

2.

4.

5.



Norovirus

1.

3.

5.



E. Coli

1.

3.