

Germs are found in the air, soil, water, and in and on our bodies. Some germs are helpful, others are harmful.

HOW DO INFECTIONS OCCUR?

For an infection to occur, germs must enter a susceptible person's body and invade tissues, multiply, and cause a reaction.

Three things are necessary for an infection to occur:

- **Source:** places where germs live (e.g., sinks, surfaces, human skin)
- **Susceptible Person:** a person with risk factors that allow germs to enter the body
- **Transmission:** the way germs are moved to a susceptible person

SOURCE (RESERVOIR)

A source is a germ and refers to a virus, bacteria, or other microbe. People can be sick with symptoms of an infection or colonized with germs (not have symptoms of an infection) and pass the germs to others.

Germs are also found in the healthcare environment. Examples of environmental sources of germs:

- Surfaces in patient/resident care areas (e.g., bed rails, medical equipment, countertops, and tables)
- Indwelling medical devices (e.g., catheters and IV lines)
- Dust, decaying debris, or moisture (e.g., wet materials from water leaks)

This material was prepared by Health Quality Innovators (HQI), a Quality Innovation Network-Quality Improvement Organization (QIN-QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 1250W/HQI/QIN-QIO-0442-02/23/23

Germs are found in the air, soil, water, and in and on our bodies. Some germs are helpful, others are harmful.

HOW DO INFECTIONS OCCUR?

For an infection to occur, germs must enter a susceptible person's body and invade tissues, multiply, and cause a reaction.

Three things are necessary for an infection to occur:

- **Source:** places where germs live (e.g., sinks, surfaces, human skin)
- **Susceptible Person:** a person with risk factors that allow germs to enter the body
- **Transmission:** the way germs are moved to a susceptible person

SOURCE (RESERVOIR)

A source is a germ and refers to a virus, bacteria, or other microbe. People can be sick with symptoms of an infection or colonized with germs (not have symptoms of an infection) and pass the germs to others.

Germs are also found in the healthcare environment. Examples of environmental sources of germs:

- Surfaces in patient/resident care areas (e.g., bed rails, medical equipment, countertops, and tables)
- Indwelling medical devices (e.g., catheters and IV lines)
- Dust, decaying debris, or moisture (e.g., wet materials from water leaks)

This material was prepared by Health Quality Innovators (HQI), a Quality Innovation Network-Quality Improvement Organization (QIN-QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 1250W/HQI/QIN-QIO-0442-02/23/23

HOW INFECTIONS SPREAD

Germs are found in the air, soil, water, and in and on our bodies. Some germs are helpful, others are harmful.

HOW DO INFECTIONS OCCUR?

For an infection to occur, germs must enter a susceptible person's body and invade tissues, multiply, and cause a reaction.

Three things are necessary for an infection to occur:

- **Source:** places where germs live (e.g., sinks, surfaces, human skin)
- **Susceptible Person:** a person with risk factors that allow germs to enter the body
- **Transmission:** the way germs are moved to a susceptible person

SOURCE (RESERVOIR)

A source is a germ and refers to a virus, bacteria, or other microbe. People can be sick with symptoms of an infection or colonized with germs (not have symptoms of an infection) and pass the germs to others.

Germs are also found in the healthcare environment. Examples of environmental sources of germs:

- Surfaces in patient/resident care areas (e.g., bed rails, medical equipment, countertops, and tables)
- Indwelling medical devices (e.g., catheters and IV lines)
- Dust, decaying debris, or moisture (e.g., wet materials from water leaks)

This material was prepared by Health Quality Innovators (HQI), a Quality Innovation Network-Quality Improvement Organization (QIN-QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. 1250W/HQI/QIN-QIO-0442-02/23/23

SUSCEPTIBLE PERSON (HOST)

A susceptible person is someone not immune or vaccinated, or with a weakened immune system. The following factors can increase a person's susceptibility to infection:

- Underlying medical conditions such as diabetes, cancer, and organ transplantation increase the risk for infection because these illnesses decrease the immune system's ability to fight infection.
- Medications used to treat medical conditions, such as antibiotics, steroids, and certain cancer fighting medications increase the risk of some types of infections.
- Medical treatments and procedures such as urinary catheters, tubes, and surgery increase the risk of infection by providing additional ways that germs can enter the body.

TRANSMISSION

Transmission refers to the way germs transfer to a susceptible person. Germs depend on people, the environment, and/or medical equipment to be transmitted in healthcare settings.

Common ways that germs travel in healthcare settings:

- Contact (i.e., touching)
- Sprays and splashes
- Inhalation
- Sharps injuries (i.e., when someone is accidentally stuck with a used needle or sharp instrument)



Infection Control Basics | CDC



Did You Know? Germs Live on Broken Skin | CDC



SUSCEPTIBLE PERSON (HOST)

A susceptible person is someone not immune or vaccinated, or with a weakened immune system. The following factors can increase a person's susceptibility to infection:

- Underlying medical conditions such as diabetes, cancer, and organ transplantation increase the risk for infection because these illnesses decrease the immune system's ability to fight infection.
- Medications used to treat medical conditions, such as antibiotics, steroids, and certain cancer fighting medications increase the risk of some types of infections.
- Medical treatments and procedures such as urinary catheters, tubes, and surgery increase the risk of infection by providing additional ways that germs can enter the body.

TRANSMISSION

Transmission refers to the way germs transfer to a susceptible person. Germs depend on people, the environment, and/or medical equipment to be transmitted in healthcare settings.

Common ways that germs travel in healthcare settings:

- Contact (i.e., touching)
- Sprays and splashes
- Inhalation
- Sharps injuries (i.e., when someone is accidentally stuck with a used needle or sharp instrument)



Infection Control Basics | CDC



Did You Know? Germs Live on Broken Skin | CDC



SUSCEPTIBLE PERSON (HOST)

A susceptible person is someone not immune or vaccinated, or with a weakened immune system. The following factors can increase a person's susceptibility to infection:

- Underlying medical conditions such as diabetes, cancer, and organ transplantation increase the risk for infection because these illnesses decrease the immune system's ability to fight infection.
- Medications used to treat medical conditions, such as antibiotics, steroids, and certain cancer fighting medications increase the risk of some types of infections.
- Medical treatments and procedures such as urinary catheters, tubes, and surgery increase the risk of infection by providing additional ways that germs can enter the body.

TRANSMISSION

Transmission refers to the way germs transfer to a susceptible person. Germs depend on people, the environment, and/or medical equipment to be transmitted in healthcare settings.

Common ways that germs travel in healthcare settings:

- Contact (i.e., touching)
- Sprays and splashes
- Inhalation
- Sharps injuries (i.e., when someone is accidentally stuck with a used needle or sharp instrument)



Infection Control Basics | CDC



Did You Know? Germs Live on Broken Skin | CDC

