Virus or Bacteria – What's the Difference?

What's the Difference?

Virus

- Can't replicate without a host, but can exist on surfaces
- Many virus infections don't cause symptoms at all. In some cases, viruses can cause significant disease, especially in certain groups of people (such as young kids, elderly adults, pregnant women)

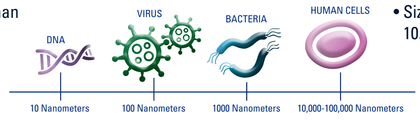
Bacteria

- Can live on its own
- Many bacteria are normally occurring, and help digest food, destroy disease-causing microbes, fight cancer cells and provide nutrients. However, bacteria can occasionally cause serious infections.

Size

Virus

- 10 to 100 times smaller than the smallest bacteria



Bacteria

- Size varies between 0.2 and 10.0 micrometers in diameter

Examples of Diseases Caused

Virus

- Common colds, chicken pox, measles, flu, COVID-19, pneumonia and other diseases

Bacteria

- Wound infections, ear infections, strep throat, pneumonia and tuberculosis

How Long Does It Live Outside the Body?

Virus

Viruses don't "live" (i.e. reproduce) outside the body but they may exist for days on external surfaces until they degrade or find a host.

Flu Viruses
Lasts for hours in the air at lower temperatures and for 24 hours on hard surfaces

SARS-CoV-2 Virus
Up to 3 hours in the air
Up to 4 hours on copper
Up to 24 hours on cardboard
Up to 48 hours on steel
Up to 72 hours on plastic
Up to 96 hours on glass

Bacteria

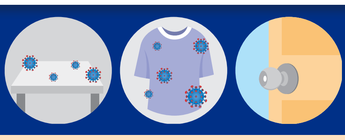
Bacteria can survive independently, but they will die if they don't find the right environmental conditions for growth.

Streptococcus pneumoniae* & *S. pyogenes survive for more than 48 hours on soft things (stuffed animals).

Salmonella can last up to six months on a cookie or cracker.

***Escherichia coli* (*E. coli*)** can live up to a day.

Staphylococcus aureus can survive for weeks on dry clothes.



How Do They Enter the Body?

Virus

Bacteria

Direct contact with infected body fluids or lesions • Indirect contact with contaminated surfaces
Inhalation (contaminated air or droplets) • Contaminated food or water • Animal contact or insect bites

Diagnosed by Examining

Virus

Bacteria

Blood and body fluids like cerebrospinal fluid, swabs from the respiratory tract, swabs from lesions, urine, stool, and infected tissue

Where Does it Live?

Virus

- Must live inside cells of person, animal, plant or even a bacterium
- Survives outside living cells for only a short time, but cannot reproduce on its own

Bacteria

- Can grow and reproduce on its own
- Can grow and reproduce in the human body and in human cells
- Some can live in extreme hot, cold or even radioactive environments

How to Prevent Contact?

Virus

Bacteria

Wash hands with soap and water • Clean and disinfect surfaces • Practice kitchen and food safety
Get vaccinated • Practice social distancing • Wear facemask

How Are Infections Treated?

Virus

- Difficult to treat
- Not affected by antibiotics
- Antiviral medications block some, but not all, viruses from entering the body or stop some from reproducing

Bacteria

- Antibiotics

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