

# Sterilization and disinfection

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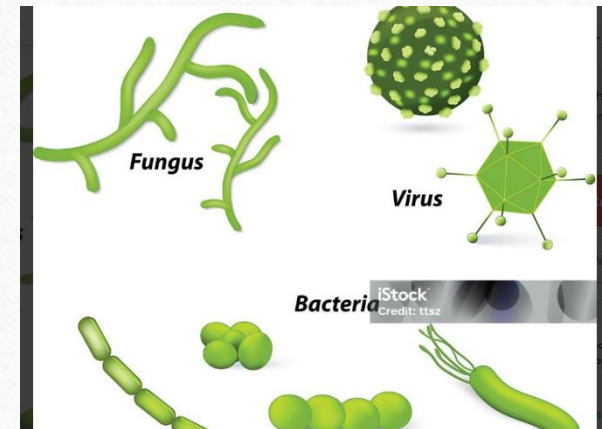
# Terminology

## Pathogens:

The word “**pathogen**” comes from Greek:

- “**pathos**” meaning *suffering or disease*
- “**-gen**” meaning *producer*  
or *that which generates*

➤ So, *pathogen* literally means “**producer of disease.**”





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## Asymptomatic infection:

- The term “**Asymptomatic infection**” is built from Greek roots:
  - “**a-**” = *without*
  - “**symptoma**” = *occurrence, happening, symptom*
- *An infection that occurs without producing symptoms.*

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### Systemic infection:

- infection that spreads throughout the body via the bloodstream affecting multiple organs and tissues.
- Unlike **localized infections**, which remain confined to one site, systemic infections can cause **widespread inflammation, fever, sepsis**, if not controlled.

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## **Disease:**

- Abnormal condition affecting an organism's structure or function, not immediately caused by external injury, and is marked by specific signs and symptoms.
- if you break a bone in an accident, that's an injury, not a disease. But if your bones weaken over time (like in osteoporosis), that's a disease.



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## Communicable disease:

- **communicable disease** is an illness that can spread from one person (or animal) to another, either directly or indirectly, through infectious agents such as bacteria, viruses, fungi, or parasites.
- **Direct transmission:** through physical contact, droplets from coughs/sneezes, sexual contact, etc.
- **Indirect transmission:** through contaminated food, water, air, objects

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## Disinfection:

word “**Disinfection**” comes from Latin roots:

- “**dis-**” = *apart, away, reversal*
- “**infectio**” (from *inficere*) = *to taint, to spoil, to corrupt*

literally means “**the act of undoing infection**” or “**removing/neutralizing contamination.**”



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## Antiseptic:

- chemical substance which inhibits the growth of microorganisms and do not kill the organisms.
- **Antiseptic** → used on **living things** (skin, wounds) to kill germs.
- **Disinfectant** → used on **non-living things** (tables, floors, tools) to kill germs.



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## **Sterilization:**

- Process by which an article, surface or medium is free of all microorganisms, either in the vegetative or spore state.
- **Antiseptic** → Apply on skin
- **Disinfectant** → Do it on doors/floors
- **Sterilization** → Super clean, zero germs left

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## Term

## Meaning (easy)

## Used on

## Example

**Antiseptic**

Against germs/infection

**Living things** (skin, wounds)

Dettol, iodine

**Disinfectant**

Kills  
germs/contamination

**Non-living things**  
(floors, tools, toilets)

Lysol, bleach

**Sterilization**

Destroys **all** forms of  
life (germs + spores)

Both **living tools**  
(surgical instruments) &  
some materials

Autoclave, boiling, UV  
light

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## Detergents:

- cleaning agents used **to remove organic matter** such as blood, pus, mucus, and body fluids from surgical instruments, equipment, and surfaces before disinfection or sterilization.
- usually **non-corrosive, water-soluble, and low-foaming**, so they don't damage delicate surgical instruments or leave harmful residues.



ANY  
QUESTIONS

