

## How Do Biological Hazards Enter the body ?

Routes of Entry:-

- 1- Inhalation through breathing.
- 2- Absorption direct contact through breaks in the skin ,mucous membrane, contact the eyes ,nose, mouth.
- 3- Ingestion through swallowing.
- 4- Injection through a puncture .

### Inhalation Route:-

Inhalation is common was for biohazards to get into the body . The effect on the body depends on the biohazards type, dose, and virulence. Unlike chemical inhalation ,we often don't know we have inhaled a bacteria, virus, or mold. Because no smell, or irritating effects, it is only when get symptoms of the infection that realize we were exposed.

**Absorption route:-** A biohazards can enter the blood stream through broken skin , such as cut, wounds. Splash of blood or body fluids to the eyes, mucous membrane, are ways that biohazards can be absorbed.

**Injection Route: -** When some sharp thing cause puncture in skin any biohazard can enter the body leading to harmful effect. e.g:- Contaminated syringes needles.

### Controlling of Exposure to Biological Hazards

**1-Engineering controls :-** These controls are the first line of defense including built in protection ,in building, work area, equipment ... Therefor the control is at the design stage, e.g; Ventilation systems & Constructions seals to create negative pressure rooms. Biosafety hoods with specific ventilation system.

**2- Administrative controls :-** These controls are does not eliminate a hazard but can significantly reduce the risk of injury e.g.:- Rules that require regular hand washing. - A rule of no eating in work areas. -Procedures such as disinfection. - Worker training.

### 3- Personal Protections :-

Personal Protective Equipment(PPE):- The most common types of PPE that protect you from biological hazards include :- - Latex gloves. - proper mask for biosafety. - Eye protection. -Face shield. - Apron & special full body safety clothes

#### How to use disposable masks ?

Surgical mask offers a barrier protection from respiratory droplets. In the use of the masks, it is important to wear them correctly. When the mask is damp, damaged or soiled, replace it. A surgical mask in general can be used for several hours. If the surface of the mask is touched or the wearer has coughs, the mask needs to be changed more often. After use, the mask should be put in a bag or wrapped with paper before disposal. Wash the hands thoroughly afterwards.

## HOW TO WEAR A MASK?

Use surgical masks instead of N95 masks.



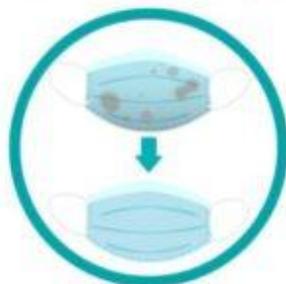
It should **COVER YOUR MOUTH, NOSE AND CHIN**, with the coloured side facing outwards.



**PINCH THE METAL EDGE OF THE MASK** so that it presses gently on your nose bridge.



Remove a used mask **HOLDING ONLY THE EAR LOOPS.**



To be effective, **CHANGE YOUR MASKS REGULARLY OR IF SOILED OR WET.**



**WASH YOUR HANDS WITH SOAP AND WATER** after disposing the soiled mask properly into a bin.



How bacteria and viruses enter the body

To cause disease, pathogenic bacteria must gain access into the body. The range of access routes for bacteria includes:

- Cuts
- Contaminated food or water
- Close contact with an infected person
- Contact with the faeces of an infected person
- Breathing in the exhaled droplets when an infected person coughs or sneezes
- Indirectly, by touching contaminated surfaces – such as taps, toilet handles, toys and nappies.

Viruses are spread from one person to another by:

- Coughs
- Sneezes
- Vomits
- Bites from infected animals or insects
- Exposure to infected bodily fluids through activities such as sexual intercourse or sharing hypodermic needles.

Forgetting to wash your hands after handling pets and animals is another way for germs to be taken in by mouth.

Curing a bacterial infection

The body reacts to disease-causing bacteria by increasing local blood flow (inflammation) and sending in cells from the immune system to attack and destroy the bacteria. Antibodies produced by the immune system attach to the bacteria and help in their destruction. They may also inactivate toxins produced by particular pathogens, for example tetanus and diphtheria.

Serious infections can be treated with antibiotics, which work by disrupting the bacterium's metabolic processes, although antibiotic-resistant strains are starting to emerge. Immunisation is available to prevent many important bacterial diseases such as Hemophilus influenza Type b (Hib), tetanus and whooping cough..