

## Infection Control in an Office Setting

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#### Definitions

- Infection control is the discipline concerned with the prevention or stopping the spread of infections
- Cleaning is the removal of visible foreign material from objects; this should occur before disinfecting.
- Disinfection describes a process that eliminates many or all pathogenic microorganisms. The effectiveness of disinfecting is dependent on prior cleaning.
- Vectors are any insect, rodent or other animal capable of transmitting pathogens that can cause humans to become ill.

## **How Infections Occur**

- According to CDC infections occur when germs enter our body, multiplies and cause the body to react.
- Germs are everywhere but for them to cause an infection, three points must be present:
- 1. Source
- 2. Susceptible persons
- 3. Transmission

### Source

- This is any place where infectious agents (germs) live.
- Examples of sources are:
- Humans; note, a person may not show signs of infection and can still pass germs to others.
- Dry surfaces equipment, counter tops, tables, desk
- Wet surfaces sinks, faucets, some equipment (depending on its use)
- Dust or decaying debris old abandoned house/structures, decaying materials in a building from a water leak

# Susceptible persons

- This is anyone.
- However, some are more susceptible than others.
- This can be those who are not vaccinated, weakened immune system like babies and elderly persons



Transmission occurs through:

- Contact via touch with hands
- Sprays and splashes when an infected person coughs and or sneezes without covering their nose and mouth. The droplets from cough and or sneeze allow germs to go short distances up to 6 ft. If these droplets contact someone's eyes, nose or mouth; transmission of the germ has occurred.
- Sharp/ needle stick injuries through bloodborne pathogens.

### Germs

- Germs are any bacteria, viruses and other microbes that cause infection.
- Some germs die almost immediately after leaving the body but others can survive for hours and as long as days.
- The length of survival varies per germ and if the conditions meet their requirements to survive.
- These may include the temperature, humidity and the type of surface.

#### Viruses

- These technically need a host to survive to allow for reproduction
- They remain infectious longest on hard surfaces as opposed to soft such as:
  - phone vs. clothing
  - counter tops vs. bed linen
- Low sunlight, low humidity and low temperatures increase a viruses viability.

- Flu: 1 day on surfaces
  - 5 mins on hands
- Stomach flu (Calicivirus): can last from days to weeks on surfaces
- Herpes: lasts for 2 hours on skin
- Parainfluenza (causes croup): 10 hours on hard surfaces

4 hours on porous materials

### Bacteria

- While viruses thrive on hard surfaces, bacteria enjoy porous materials and they can remain infectious longer; but their length of survival outside the body is dependent on the external conditions.
- E. Coli & Salmonella: two most common causes of food poisoning can live for a few hours to 1 day outside of the body.

- Staphylococcus aureus: responsible for wound infections can survive for weeks on clothing
- Streptococcus pneumonia & Streptococcus pyogenes (responsible for ear infections and throat infections) can survive on cribs and stuffed animals overnight or longer. This can also be spread via droplets from sneeze or cough

## Prevention

- According to the Institute for Work and health, prevention can be considered an umbrella to cover a range of activities or interventions aimed at reducing the risks or threats to health.
- They are 3 tiers of prevention: primary, secondary and tertiary

## **Primary Prevention**

- Aims to limit / reduce disease or injury before it occurs.
- This is achieved by preventing or limiting the exposure to the hazards that can cause disease, injury, altering unhealthy or unsafe behaviors that can lead to disease or injury.
- Once the type and nature of the germ is identified, the preventative measures can be activated.

Preventative interventions/ activities may include:

- 1. Immunizations
- 2. Cleaning
- 3. Disinfecting
- 4. Education about the disease
- 5. Education on healthy lifestyle habits

# Cleaning

This encompasses many activities:

- Sweeping; having brooms for specific locations
- Emptying garbage cans regularly
- Changing garbage bags regularly
- Removal of stagnant water to prevent the multiplying of mosquitoes

- Hand washing
- Use of hand sanitizer
- Removal of debris
- Change bed linen often
- Different cloths should be used for different areas (bathroom, desk etc)

# Hand washing

- For illnesses that are considered contagious, handwashing is the most effective way of preventing the spread.
- Studies have shown that the 5-step method of hand washing for at least 20 sec has been very effective in preventing the spread of germs.
- An easy reminder will be singing the happy birthday song twice.
- No need to limit yourself to that song, any song for 20 secs is good enough.

# Disinfecting

- The most effective ingredient in killing germs is **Sodium Hypochloride 5.25%**
- Should be done after cleaning.
- Materials or items used to disinfect an area should be kept for that area (mop for bathroom vs. mop for a reception area)

#### Points to note

- Your cleaning and disinfecting regime are dependent on the activity and the nature of the person and business.
- An infection control audit may be useful to know that you are cleaning and disinfecting correctly and utilizing the best item for the institution.
- Always follow the guidelines from the manufacturer on how to use their products and not eyeball.

### References

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## THANK YOU