

WPS Transportation Department

GREEN CLEANING and DISINFECTION PROGRAM



New Disinfectant

Training 11/5/17

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Funded by: Toxics Use Reduction Institute, UMass Lowell

Why is WPS providing a new disinfectant product?

- **The types of disinfectants typically used in schools are corrosive.**
- **As a result, they can affect the user's health – can cause and/or trigger asthma, burn or irritate eyes, skin and respiratory system, and have reproductive effects.**
- **The new disinfectant will minimize effects on health compared to products we've used in the past.**



Why reduce use of sanitizers and disinfectants?
Disinfectants Are Not Cleaners - They are Pesticides!



The active ingredients of disinfectants are among the most toxic chemicals used in food service work.

Ingredient	Hazards	User Health Effects
Quaternary Ammonium Chlorides	Corrosive	Eye & skin burns, sensitizer, asthma
Sodium Hypochlorite (bleach)	Oxidizer Reactive	Eye & skin burns; Vapors are a respiratory irritant

Disinfectants and Work Related Asthma

Products	# Cases
Unspecified	104
Bleach	43
Disinfectants	20
Ammonia	14
Acids, bases, oxidizers	23

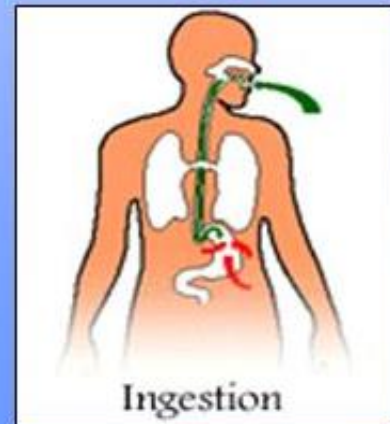
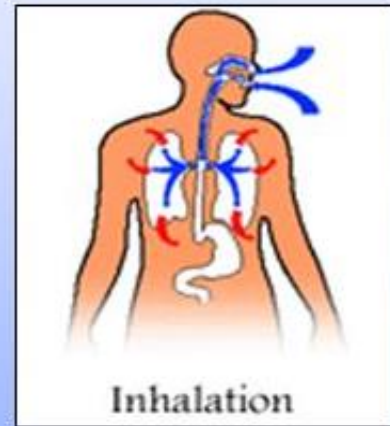
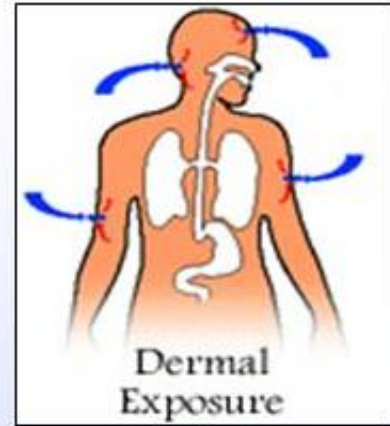
Note: 12% of all work related asthma cases in 4 states were associated with cleaning products

Custodial workers experience one of the highest rates of occupational asthma.

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Routes of Exposure

- **This product can be more hazardous in tablet form when its wet, than when diluted in solution:**
 - **The wet tablet - can irritate and/or burn your skin, eyes and mucous membranes (nose, throat).**
 - **The diluted form - can cause irritation to these areas.**



First Aid

- **Contact with skin - flush for 15 minutes.**
- **Contact with eyes - Remove contact lenses and flush eyes for 15 minutes.**
- **Remove contaminated clothing and seek medical attention.**
- **Wash clothing separately.**



Personal Protective Equipment

- **When mixing tablet in water – wear:**

- **chemical splash goggles**
- **nitrile rubber gloves**

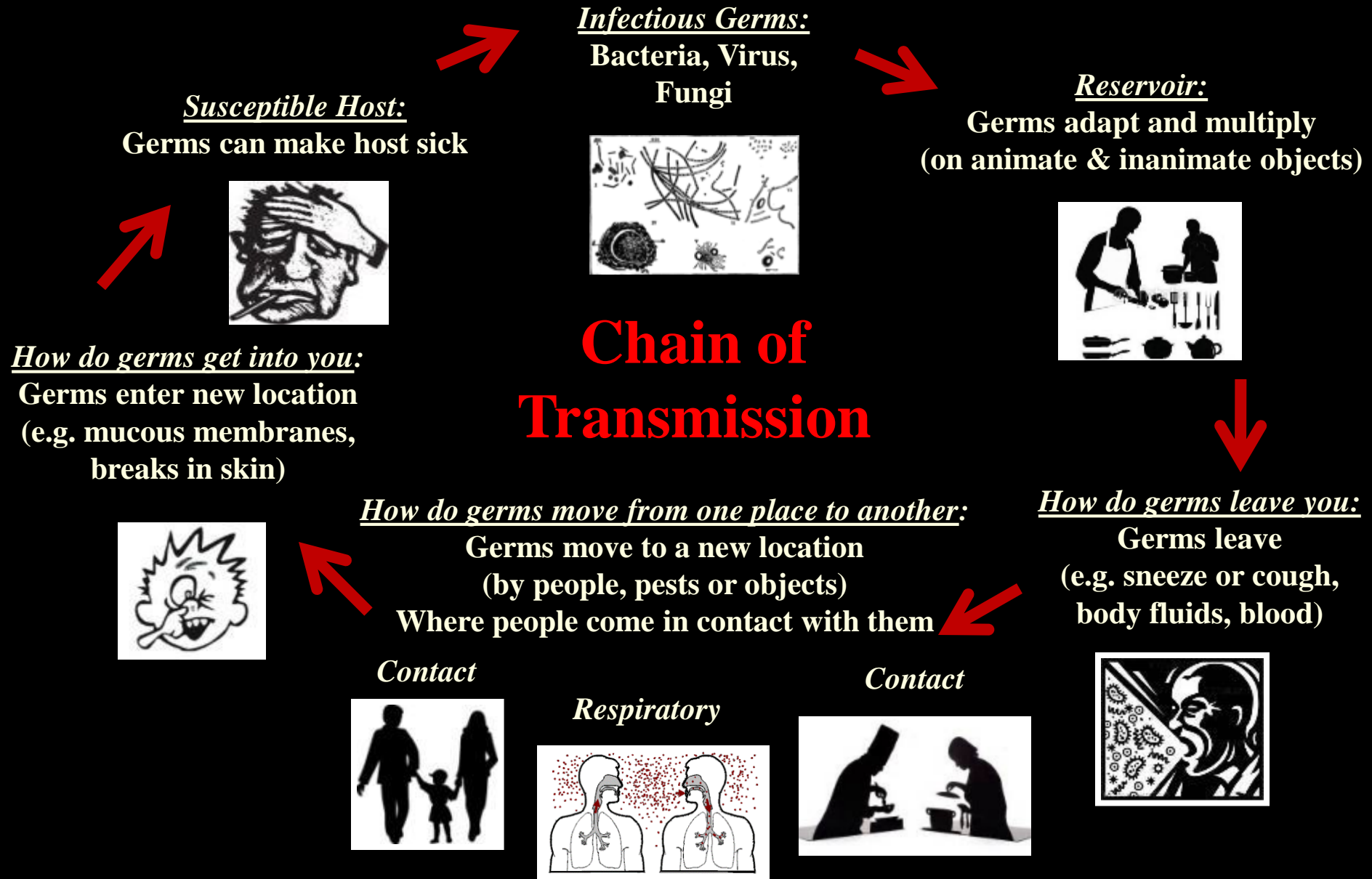


- **When using solution – wear:**

- **nitrile gloves**



How Are Germs Transmitted?



3 Levels of Germ Control



1. Cleaning for Germ Control



- Involves physically removing germs *and* conditions they need to survive (e.g. dirt or food).
- Use water, detergent and a cloth or microfiber to scrub the surface.

2. Sanitizing for Germ Control



Designed for use on both porous and nonporous surfaces:

- Food contact surfaces: sanitizing rinses for surfaces such as dishes and cooking utensils.
- Non-food contact surfaces: carpet, etc.



3. Disinfecting for Germ Control



- Use on hard nonporous surfaces.
- Common disinfectant ingredients that pose health risks:
 - bleach (WPS has eliminated)
 - quaternary ammonium compounds (this product replaces)

3. Disinfecting for Germ Control: *Blood Spills*

- *To comply with OSHA BBP Standard, use:*

A product that lists the specific BBP viruses - HIV and hepatitis B and C.

- *For other specific diseases or outbreaks, work with supervisor to obtain correct product.*



EZ DISINFECTANT	
Disinfectant -- Bactericide -- Virucide -- Fungicide For Hospital, Institutional and Home Use	
Active Ingredients:	
Compound A	15.0 %
Compound B	2.5 %
Compound C	2.5 %
Inert Ingredients	80.0 %
TOTAL	100.0 %
This product has been proven effective against the following organisms:	
<i>Staphylococcus aureus</i>	
<i>Salmonella enterica</i>	
<i>Pseudomonas aeruginosa</i>	
<i>Trichophyton mentagrophytes</i>	
HIV-1	
E.P.A. Reg. No. 30001-301	
Hospitals, Nursing Home Facilities, other health care establishments, schools, veterinary clinics, office buildings, retail establishments, industrial facilities	

When to Clean, Sanitize or Disinfect?

- *What is the surface to be managed:*
 - porous (example – laundry)
 - non-porous (examples – tables, pots, pans, dishes)
- *Regulations requiring disinfection:*
 - Spills of blood and body fluids
 - Toileting areas



When to Clean, Sanitize or Disinfect?

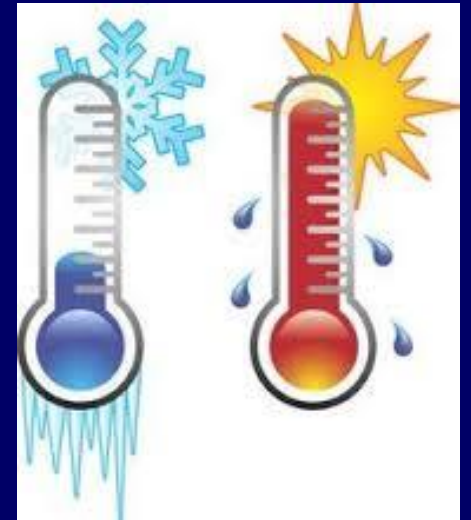
- **Disinfecting won't clean and cleaning won't disinfect!**
- **Allergens such as peanut butter must be removed and washed with a detergent!**



What other materials contain proteins?

Other Factors that Compromise Effectiveness of Sanitizers

- **Contact time (amount of the time it takes sanitizer to “kill” a germ)**
 - every product has different kill time
 - let surface air dry whenever possible
 - new product has a 4 minute kill time
- **Appropriate temperature**
- **Shelf life – expiration date (one week in solution)**



Why do we clean and rinse before we sanitize and disinfect?

- **Materials on the surface to be disinfected (cleaning product residues, protein and dirt) compromise the disinfectant's effectiveness.:**
 - Give germs a place to hide (disinfectant needs to be in contact with germ to kill it)
 - Can change the chemical composition of the disinfectant and can make it less effective



Preventing Cross Contamination

Cross Contamination:

- **Is the transfer of infectious germs from one surface, object or person to another.**
- **Involves understanding Chain of Infection:**
 - where germs live and multiply, and
 - how they are transferred to a new location.
- Shared cleaning equipment.
- Product containers and dispensers.

Preventing Cross Contamination

Sources of Cross-Contamination:

- **Used cloth or mop head, especially if left soaking in dirty solutions.**
- **Sanitizer solutions, prepared in a dirty container, or stored for long periods of time.**
- **Contaminated hands or gloves.**



Preventing Cross Contamination

- **Strategies - Surface to Surface**
 - **Fold cloth into 8, and use a new side for each surface.**



- **Change cloths or mop heads when moving to a new surface (e.g. tables to counter).**

Management of High Touch Surfaces: Touched by a Variety of Hands

**Brainstorm Touch Points
In the Bus**