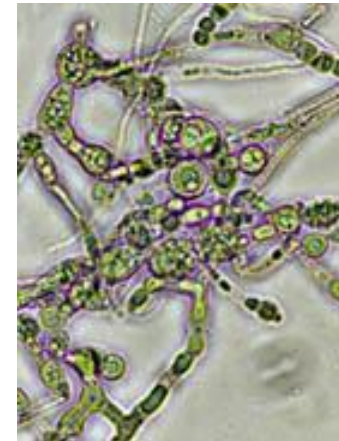
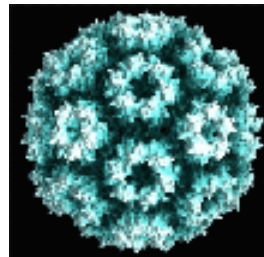

SCORE Guide to the Principles of Disinfecting –

The Cleaning Professional's Guide to
Cleaning for Human Health

What are Bloodborne Pathogens?

- **Bloodborne pathogens (germs)** are **bacteria, viruses** and **fungi** microorganisms that are carried in blood and can cause disease in people.



Common Types of Bloodborne Pathogens (Germs)

- Bacteria
 - Staphylococcus, Salmonella, E-Coli
- Viruses
 - H1N1 Influenza A, HIV, Hepatitis, Herpes
- Fungi
 - Stachyboctryus

H1N1 Influenza A (Swine Flu)

- **H1N1** is a new virus first detected in people in 2009
- **H1N1** is spreading from person-to-person much the same way that regular influenza viruses spread
- **H1N1** can be spread indirectly and people may become infected by touching something with the flu virus on it and then touching their mouths or noses
- The Center for Disease Control (CDC) and the World Health Organization (WHO) have issued a world wide pandemic warning

H1N1 Influenza A (Swine Flu)

CDC expects that more cases, more hospitalizations, and more deaths from this outbreak will occur over the coming days and months.

- Influenza is always serious – each year in the United States, seasonal influenza results, on average, in an estimated 36,000 deaths and more than 200,000 hospitalizations from flu-related causes..
- Because this is a new virus, most people will not have immunity to it, and illness may be more severe and widespread as a result. A vaccine has been created and production is ramping up.

Hepatitis B (HBV)

- 1 to 1.25 million Americans are chronically infected
- Symptoms include: jaundice, fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting (symptoms can occur 1-9 months after exposure)
- May lead to chronic liver disease, liver cancer and death
- HBV can survive for at least one week in dried blood
- Vaccination available since 1982

Staphylococcus (STAPH)

- **Staph** are bacteria commonly carried on the skin or in the nose of approximately 25%-30% of the human population and are the most common cause of skin infections in the U.S.
- Most **staph** skin infections are minor (i.e. pimples) and can be easily treated with antibiotics.
- **Staph** bacteria can also cause more serious infections, such as blood stream infections and pneumonia, which require more aggressive treatment.
- Some **staph** bacteria are resistant to antibiotics. **MRSA** is a type of staph that is resistant to a certain class of antibiotics

Methicillin-Resistant

Staphylococcus Aureus (MRSA)

- Most people with MRSA on their skin or in their nose are unaware they are colonized, and never develop a MRSA infection
- MRSA is transmitted most frequently by skin-to-skin wounds
- Staph & MRSA infections in schools can be prevented in staff and students follow basic hygiene measures

How Microbes (Germs) Spread

- The most common modes germs can spread or transmit by are:
 - ❑ Air
 - ❑ Dust
 - ❑ Bodily fluids
 - ❑ Food & Water food
 - ❑ Non-living objects

Potentially Infectious Bodily Fluids

- ❑ Blood
- ❑ Saliva
- ❑ Vomit
- ❑ Urine
- ❑ Semen or vaginal secretions



Control of Germs

- ❑ Cleaning
 - Removal of unwanted soil or contaminants

- ❑ Sanitizing
 - Removal of majority of targeted microbes from an object

- ❑ Disinfecting
 - Total eliminating of most pathogenic organisms from an object

Direct vs. Indirect Transmission

■ Direct

□ Person to person

- Contact with another person's blood or bodily fluid that may contain blood
- Mucous membranes: eyes, mouth, nose
- Non-intact skin

■ Indirect

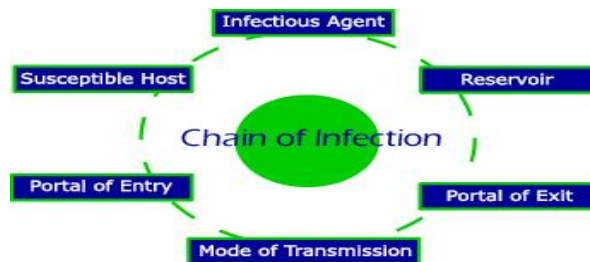
□ Object to person

- Contact with surface contaminated by infected person or host

Breaking the Chain of Infection

□ Major Control Strategies

- Proper hand washing
- Universal Precautions
- Appropriate and prudent use of cleaning & disinfecting agents
- Managed cleaning procedures & on going training of cleaning professionals



Proper Hand Washing

- Wash your hands often with soap and warm water especially after coughing or sneezing for 15 to 20 seconds
- Alcohol-based hand sanitizers or gel sanitizers are also effective when soap and water are not easily accessible



Personal Protective Equipment (PPE)

- Anything that is used to protect a person from exposure
 - Latex, vinyl or nitrile gloves
 - Air masks
 - Goggles
 - Aprons



Hand Washing After Cleanup of Bodily Fluids

- Wash hands immediately after removing **PPE**
- A hand sanitizer can be used but wash with soap and water as soon as possible



Green Cleaning - Understanding the Role of Disinfectants & Sanitizers

- ❑ Disinfectants are classified under the Federal Insecticide, Fungicide and Rodenticide Act as “pesticides”. The EPA prohibits manufacturers from making claims that disinfectants & sanitizers are “green” or “environmentally sensitive”. Nonetheless, disinfectants & sanitizers play an important role in all green cleaning policies.



Common Types of EPA Registered Microbe Killing Agents Linked to Application

- ❑ **Quaternary Ammonium Compounds**
 - “Quats” are the most commonly utilized class of disinfectants and carry a cationic (positive) charge that results in the total elimination of most pathogenic organisms when applied properly.

- ❑ **Hydrogen Peroxide**
 - For years a commonly utilized class of sanitizer; recent success in addressing this historically unstable chemical has provided an opportunity to produce disinfectant level products.

- ❑ **Alcohols**
 - Used exclusively as active ingredient in hand sanitizers

EPP Policy & Criteria for Selecting Disinfectants & Sanitizers

- ❑ EPA Registered kill claim linked to disinfecting or sanitizing application
- ❑ Product pH between 2.5-12, with preference to products closest to neutral pH (7)
- ❑ Limited or no fragrance
- ❑ Low VOC's
- ❑ Not formulated using chlorine, butyl, or phenol compounds

Understanding the pH Scale

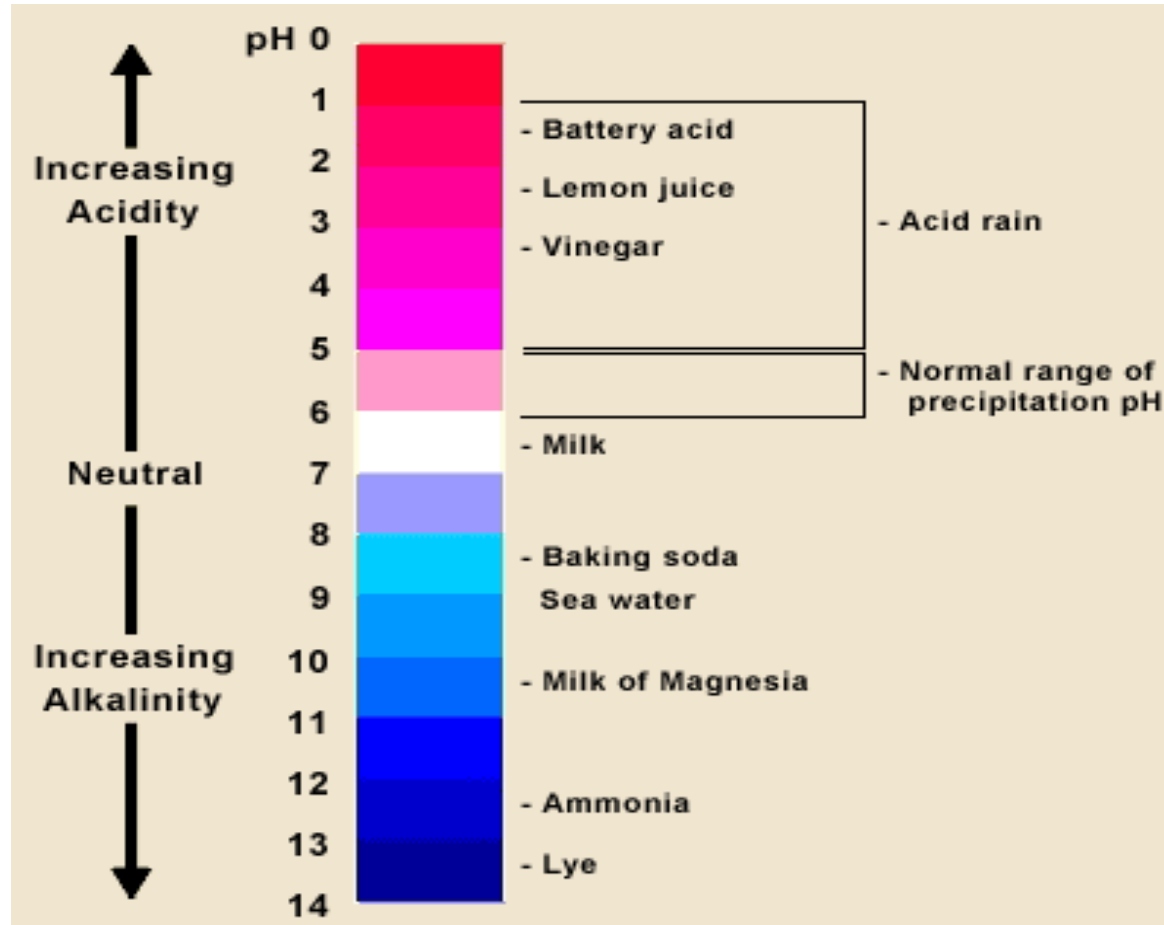
- ❑ The **pH** [(potential of) H(ydrogen)] scale measures how **acidic** or base (**alkaline**) a solution is just as the Fahrenheit scale is used to measure temperature
- ❑ The range of **pH** scale is from 0 to 14 from very acidic to very alkaline. A pH of 7 is neutral. A pH less than 7 is acidic and greater than 7 is alkaline
- ❑ Each whole **pH** value below 7 is ten times more acidic than the next lower number. For example, a **pH** of 4 is ten times more acidic than a **pH** of 5 and a hundred times more acidic than a **pH** of 6.
- ❑ Each whole **pH** value above 7 is ten times more alkaline than the next higher number. An example would be, a **pH** of 10 is 10 times more alkaline than a **pH** of 9.

OSHA Bloodborne Pathogen Standard

- **OSHA** requires that anyone whose job requires exposure to **Bloodborne Pathogens** must complete training designed to eliminate or minimize employee exposure. The standard states that this training must be preformed annually.



The pH Scale



Limiting the Use of Disinfectants & Sanitizers

- ❑ Limit use of disinfectants to areas where people are likely to come into contact with contaminated surfaces (e.g. restroom fixtures, doorknobs, other high-touch surfaces)
- ❑ Limit use of sanitizers only where there is a desire to reduce microbes to a safe level and where the use of stronger toxic disinfectant product is not indicated (e.g. food prep and services areas, gym equipment, custodial closets, etc) and circumstance prescribed by public health codes

Green Cleaning – Dilution Control Disinfectants & Sanitizers

- use a chemical measuring and dilution control system (preferably closed system) that limits worker exposure to chemical concentrates while facilitating the proper dilution of chemical



Equipment Management Strategies

- ❑ Manual restroom equipment is not used to clean any other areas of the building.
- ❑ Manual restroom equipment clearly marked for restroom use only (i.e. color coded and/or “restroom use only” identified) and includes: mops, brushes, brooms and other non-automated.
- ❑ Powered equipment used in restrooms must be properly cleaned/sanitized after restroom use and before it is used to clean other areas.

RESTROOM USE ONLY

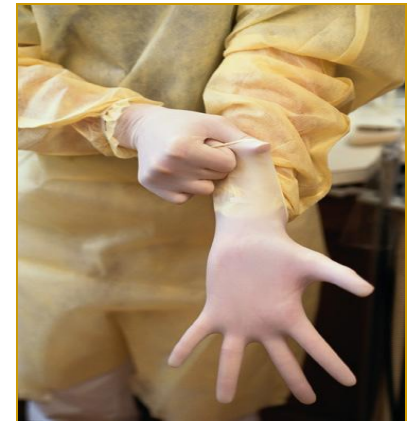


Role of the Cleaning Professional

- Addressing the spread of germs in schools is essential to the health of our youth, our schools, and our nation.
(Center For Disease Control 2007)
- Cleaning professionals are entrusted to control the spread of germs inside buildings. Your knowledge and understanding about interactions between man and germs and disinfectants can protect us all from the potential hazards of germs and disinfectants. *(SIPC 2007)*

PPE Rules to Remember

- Always check **PPE** for defects or tears before using
- IF **PPE** becomes torn or defective remove and get new
- Remove **PPE** before leaving a contaminated area
- Do not reuse disposable equipment



Decontamination of Bloodborne Pathogen Spills

- When cleaning up surfaces use **EPA** approved disinfectant
- Read and follow all instructions on label including dwell time
- Dispose of all wipes in biohazard containers
- **PPE** should be removed and disposed of in biohazard containers

Exposure Incident

- A specific incident of contact with potentially infectious bodily fluid
- If there are no infiltrations of mucous membranes or open skin surfaces, it is not considered an occupational exposure
- Report all accidents involving blood or bodily fluids
- Post-exposure medical evaluation