



Virginia Department of
Behavioral Health &
Developmental Services

Infection Control Tips

Presented by:

**The Virginia Department of Behavioral Health and
Developmental Services**

**The Office of Integrated Health
Health Supports Network**

Objectives

- 1. Define hand hygiene.**
- 2. Identify the 3 things that must occur for infections to spread.**
- 3. State 3 medical conditions that increase risk for infections.**
- 4. Identify at least 3 standard recommendations to prevent infection.**
- 5. Define Standard Precautions.**
- 6. Define Transmission Based Precautions.**
- 7. Identify at least 3 proactive preventative measures to reduce the risk for infection.**

Pre -Test

1. Hand hygiene is defined as
 - a. Performing handwashing, antiseptic hand rub, or surgical hand antisepsis.
 - b. Applying nail polish.
 - c. Clipping your nails.
 - d. Going for a manicure.

2. Infections occur when all three of these happen (mark all that apply).
 - a. There is a source.
 - b. There is a susceptible person.
 - c. Transmission occurs.
 - d. There is a full moon.

3. These medical conditions cause a higher risk for infections (mark all that apply).
 - a. Diabetes
 - b. Ingrown toe nail
 - c. Heart disease
 - d. Lung diseases

4. Identify 5 common signs of infection.
 - a. Diarrhea
 - b. Fatigue
 - c. Respiratory symptoms
 - d. Short of breath
 - e. Muscle aches
 - f. Abdominal bloating
 - g. Fever

Pre - Test continued

5. Identify three standard recommendations to prevent infections (mark all that apply).
- a. Hand washing.
 - b. Handle laundry carefully.
 - c. Ensure appropriate room placement.
 - d. Wear a Hazmat suit.
6. Standard precaution is defined as making use of common sense practices and personal protective equipment use that protect caregivers from infection and prevent the spread of infection from person to person.
- a. True
 - b. False
7. Transmission based precautions is defined as the second tier of basic infection control and are to be used in addition to Standard Precautions for people who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.
- a. True
 - b. False
8. Identify three proactive measures to help prevent infections (mark all that apply).
- a. Ensure individuals get vaccines.
 - b. Practice hand washing frequently.
 - c. Use hand sanitizer when soap and water are not available.
 - d. Keep a safe distance when sick.

Important terms and Definitions

- **Alcohol based hand rub** - alcohol based solution that contains between 60-95% alcohol reduces the number of organisms on the hands (CDC, 2002).
- **Antimicrobial soap** - a soap containing agents to reduce microbes (CDC, 2002).
- **Antiseptic hand wash** - using soap and water or other detergents that have an antiseptic agent (CDC, 2002).
- **Hand washing** - using plain water and soap to wash hands (CDC, 2002).
- **Hand Hygiene** - refers to performing handwashing, antiseptic hand rub, or surgical hand antisepsis (CDC, 2002).
- **Plain Soap** - detergents that lather, but contain no antimicrobials (CDC, 2002).
- **Visibly Soiled Hands** - dirt, grease, oils, and other visible materials can be seen on the hands (CDC, 2002).
- **Microbes** - small living organisms (O'Toole, 2017).
- **Vaccine** - preparation containing micro-organisms for producing immunity to disease (O'Toole, 2017).
- **Germs** - a type of microbe that can cause disease (CDC, 2002).
- **Community spread** - means people have been infected with the virus in an area, including some who are not sure how or where they became infected.

How Infection is Spread

Spreading of Infection

There are three things that must occur for infections to spread:

1. **The SOURCE** - Refers to a virus, bacteria, germs.
2. **The HOST** - A person/environment.
3. **The TRANSMISSION** - A vehicle
(i.e. a way for germs, bacteria,
or a virus to be moved (CDC, 2016).



Remember: germs, bacteria, or viruses cannot move themselves. They depend on us to touch surfaces, cough or sneeze.

Who is at Risk for Infections?



EVERYONE

Who is at Higher Risk for Infection Than the General Population?

Individuals with the following medical diagnoses/conditions; those taking the following medications; and/or those receiving the following treatments, may be more susceptible to infections and the complicating effects of infection, due to a lowered immune response.

(This is not an all-inclusive list)

- Heart Disease
- Diabetes
- Lung Disease (Asthma, COPD)
- Indwelling Devices (Catheters)
- Cancer Treatments
- HIV
- Immune Suppressing Drugs
- Dialysis Patients
- Cancer
- Recent Surgery
- Malnourished/Under-nourished
- The elderly (CDC, 2019).

People with disabilities experience high rates of chronic health conditions (diabetes, obesity, heart disease). Chronic health conditions affect quality of life and can weaken the body's immune response (Haverman & Scott, 2014).

Strategies to Prevent Infection

- Regularly wash hands.
- Use hand sanitizer, if hand washing is unavailable.
- Avoid touching your eyes, nose, and mouth.
- Use your elbow when coughing or sneezing.
- Thoroughly cook meat and eggs.
- Avoid crowds.
- Avoid close contact with anyone showing symptoms of respiratory illness (i.e. coughing and sneezing).
- Frequent cleaning of habitually touched surfaces (*i.e. tables, doorknobs, light switches, handles, desks, toilets, faucets, sinks*) with household cleaners and EPA-registered disinfectants (CDC, 2020; WHO, 2020).

Standard Precautions/ Transmission Based Precautions

Standard Precautions

Used for all basic care:

- Perform hand hygiene diligently.
- Use Personal Protective Equipment (PPE) if illness/infection is suspected.
- Follow respiratory hygiene & cough etiquette principles.
- Properly clean & disinfect equipment used for providing care (e.g. stethoscopes, thermometers, etc.).
- Clean and disinfect environment appropriately.
- Handle textiles and laundry carefully.
- Consider individual's room placement.

(Consider keeping medically fragile individuals farthest away from those with illness/infection) (CDC,2016).



STANDARD PRECAUTIONS



Transmission Based Precautions

Second tier of basic infection control.

***Use in addition to Standard Precautions
for people who are ill (CDC, 2016).***

- **Contact Precautions**
- **Droplet Precautions**
- **Airborne Precautions**



CONTACT PRECAUTIONS EVERYONE MUST:



Clean their hands, including before entering and when leaving the room.

PROVIDERS AND STAFF MUST ALSO:



Put on gloves before room entry. Discard gloves before room exit.



Put on gown before room entry. Discard gown before room exit.

Do not wear the same gown and gloves for the care of more than one person.



Use dedicated or disposable equipment. Clean and disinfect reusable equipment before use on another person.



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DROPLET PRECAUTIONS



EVERYONE MUST:

Clean their hands, including before entering and when leaving the room.



Make sure their eyes, nose and mouth are fully covered before room entry.



or



Remove face protection before room exit.



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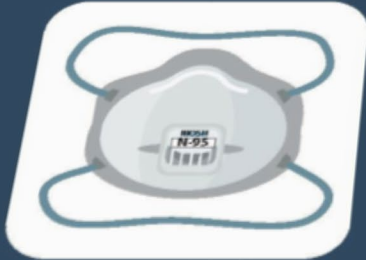
AIRBORNE PRECAUTIONS



EVERYONE MUST:



Clean their hands, including before entering and when leaving the room.



Put on a fit-tested N-95 or higher level respirator before room entry.

Remove respirator after exiting the room and closing the door.



Door to room must remain closed.



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Personal Protective Equipment (PPE)

Handwashing

**The first and last step in the use of
Personal Protective Equipment**



VIDEO:

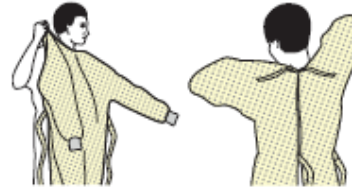
<https://www.youtube.com/watch?v=eZw4Ga3jg3E&feature=youtu.be>

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



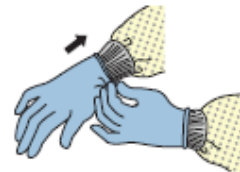
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



Sequence for Putting On Personal Protective Equipment (PPE)

Donning PPE

Demonstration of How to Put On and Take Off PPE



VIDEO:

<https://vimeo.com/399525901/9b6cacca09>

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

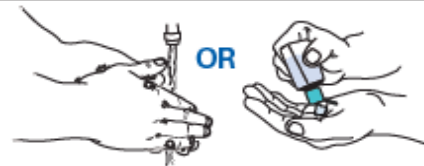


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



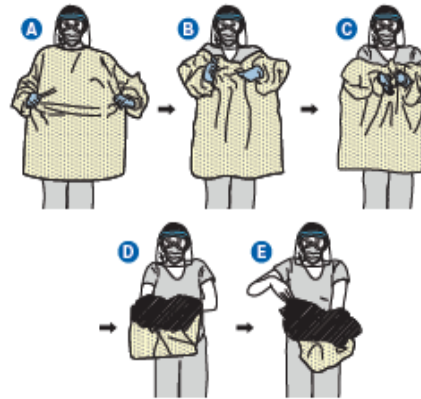
How to Safely Remove Personal Protective Equipment (PPE) Example 1

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

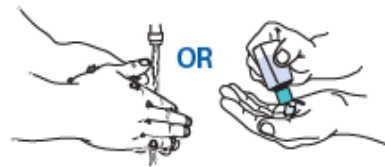


3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



How to Safely Remove Personal Protective Equipment (PPE) Example 2

Proactive Preventative Measures

Importance of Vaccines

- Vaccines use your body's immune defense system to help build immunity against disease (CDC, 2018).
- Some vaccines may be effective with one dose, while other vaccines take 2 or 3 doses for the body to build up a defense (CDC, 2018).
- Some vaccines may require a booster years later to keep immunity levels up (CDC, 2018).

Development of a vaccine may take years before the FDA approves for use.

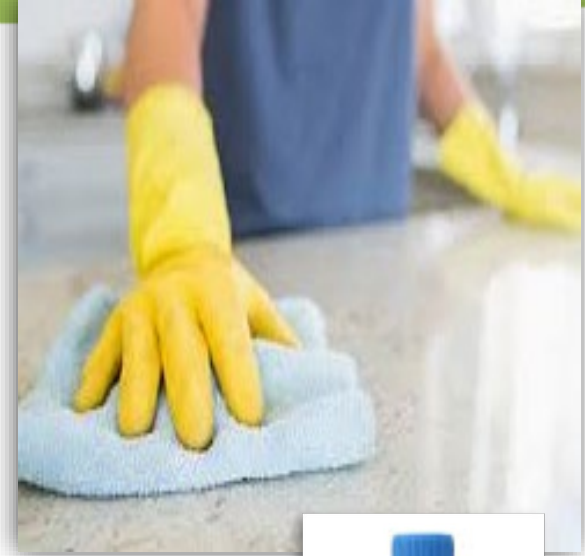


Cleaning and Disinfection Tips

- **Wear gloves when cleaning and disinfecting surfaces.**
- **When surfaces are visibly dirty, they should be cleaned using a detergent or soap & water prior to disinfection.**
- **Diluted household bleach can be used (if appropriate for surfaces). Follow manufacturer's instructions for application and proper ventilation.**
- **Never mix household bleach with ammonia or any other cleanser (CDC, 2020).**

Prepare bleach solution by mixing:

- **5 tablespoons (1/3 cup) bleach per gallon of water or**
- **4 teaspoons bleach per 1 quart of water (CDC, 2020).**



Laundry Recommendations

- **Hot-water laundry cycles should be used, wash with detergent in water $\geq 160^{\circ}\text{F}$ ($\geq 71^{\circ}\text{C}$) for ≥ 25 minutes.**
- **Hot-water laundry cycles and 1 cup of bleach can be used for white fabrics (towels, wash cloths, etc.). An extra rinse cycle can help get rid of any bleach residue.**
- **Package, transport, and store clean textiles and fabrics by methods that will ensure their cleanliness and protect them from dust and soil during inter-facility loading, transport, and unloading.**
- **Do not leave damp textiles or fabrics in machines overnight.**
- **After washing, put in clothes dryer and dry on hottest setting each fabric will tolerate.**



When to Wash Your Hands

One of the best ways to protect yourself and others is to frequently wash your hands.

Not just before and after wearing gloves.

- After coughing or sneezing.
- After blowing your nose.
- After cleaning anything.
- After taking out the trash.
- After using the bathroom.
- BEFORE & after handling any raw meat.
- BEFORE & after preparing any food.
- BEFORE eating.
- After handling a pet or pet food.
- After providing care to someone.
- After helping an individual use the toilet.
- After changing a diaper or incontinence brief.
- After providing medical care (CDC, 2019).



How to properly Wash Hands

There are five basic steps recommended by the CDC for hand washing:

- 1) Wet hands with warm running water and apply soap.
- 2) Lather up! Rub hands together, rub between fingers and finger nails.
- 3) Rub hands together for at least 20 seconds. If you need a way to time yourself, sing “Happy Birthday or Twinkle, Twinkle Little Star” twice.
- 4) Rinse hands with running water until all soap is gone.
- 5) Dry hands by using a clean paper towel or air dryer (CDC, 2019).

Finger nail length increases pathogens on finger tips and under nails (CDC, 2002).



Help staff and individuals by utilizing posters in restrooms detailing proper hand hygiene.

How to use Hand Sanitizer

- Apply the correct amount of gel to the hand. Read the instructions to determine how much is appropriate for that product.
- Rub hands together vigorously.
- Spread gel over all surfaces of the hand (front, back, in-between fingers, around finger nails.) (CDC, 2019)
- **Do not blow on hands to dry.**

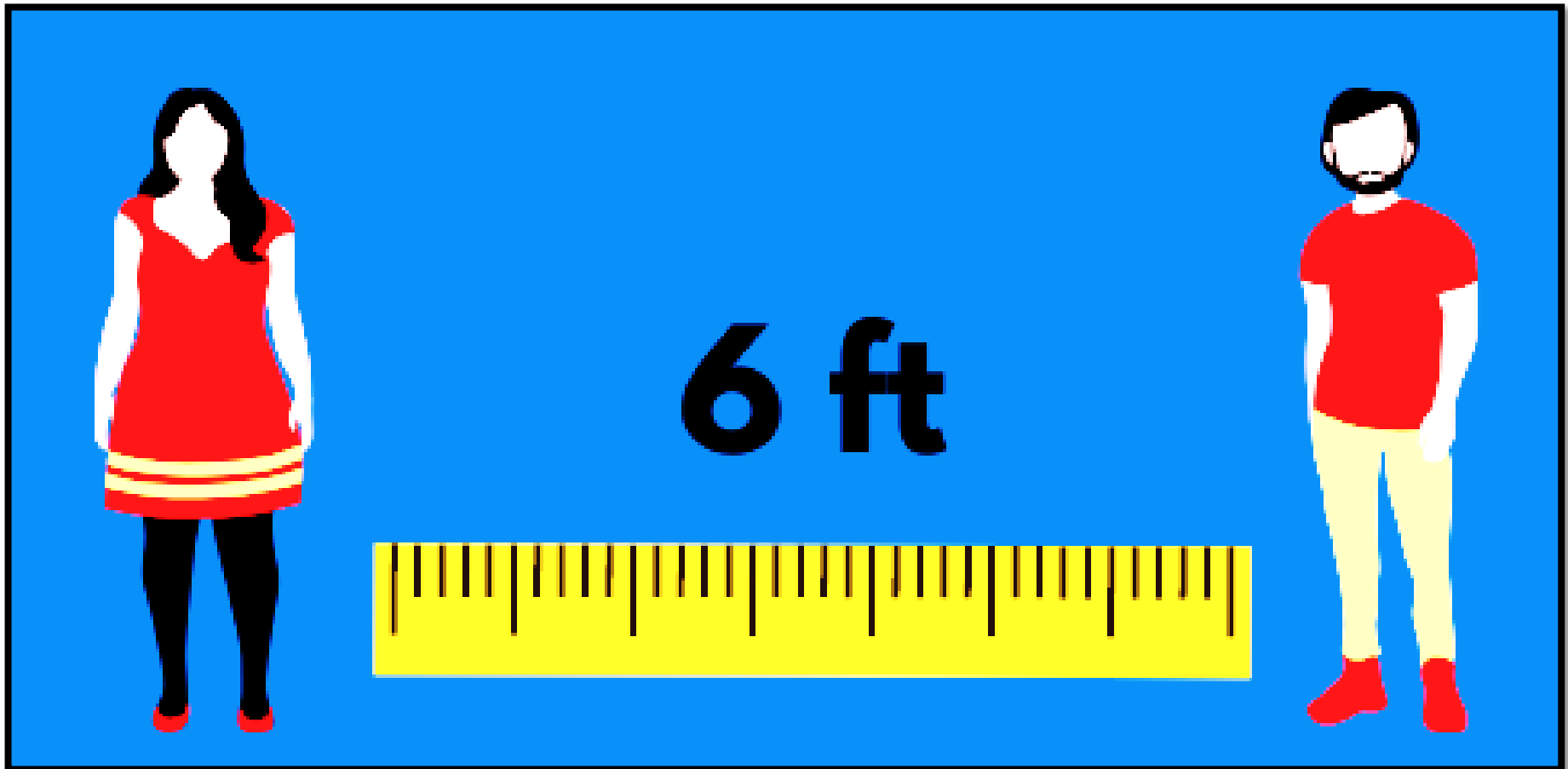


DANGER !

Hand sanitizer is not meant for oral consumption! It can cause alcohol poisoning (CDC, 2019).

Keep a safe distance

**Keep a safe distance from people who are sick
Or show symptoms of illness.**



Additional Resources

Check out the link below for info on proper food preparation:

<https://www.mayoclinic.org/diseases-conditions/infectious-diseases/symptoms-causes/syc-20351173>

For a list of EPA registered disinfectants:

<https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>

Printable CDC Poster for Contact Precautions:

<https://www.cdc.gov/infectioncontrol/pdf/contact-precautions-sign-P.pdf>

Printable CDC Poster for Droplet Precautions:

<https://www.cdc.gov/infectioncontrol/pdf/droplet-precautions-sign-P.pdf>

Printable CDC poster for Airborne Precautions:

<https://www.cdc.gov/infectioncontrol/pdf/airborne-precautions-sign-P.pdf>

For a list of preventable disease and vaccines:

<https://www.cdc.gov/vaccines/schedules/easy-to-read/child-easyread.html#vpd>

For more information on vaccines:

<https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>

For more information and tips on handwashing:

<https://www.cdc.gov/handwashing/show-me-the-science-handwashing.html>

Printable CDC Posters on handwashing:

https://www.cdc.gov/handwashing/pdf/handwashingPoster_B_8x11_ENG-p.pdf

https://www.cdc.gov/handwashing/pdf/handwashingPoster_A_8x11_ENG-p.pdf

Printable hand sanitizer fact sheet:

<https://www.cdc.gov/handwashing/pdf/hand-sanitizer-factsheet.pdf>

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Pre -Test Answers

1. A
2. A, B, C
3. A, C, D
4. A, B, C, D, E or G
5. A, B, C
6. T
7. T
8. A, B, C, D



Congratulations!!!