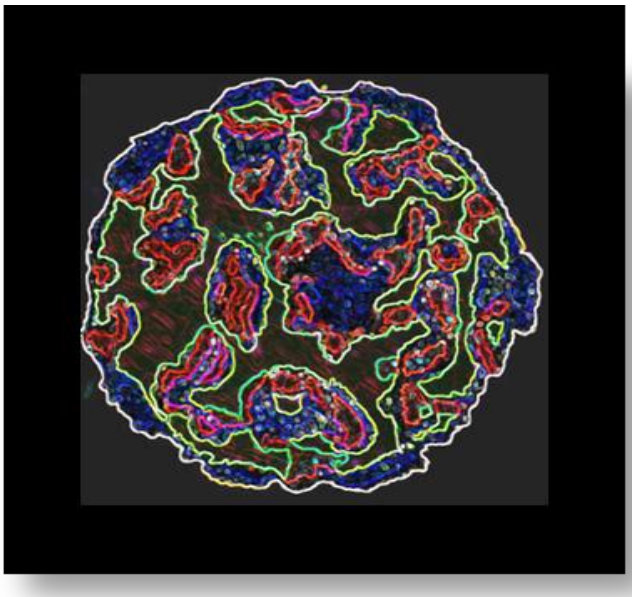
“COVID-19 Educational Activity Booklet for the Plain Community”

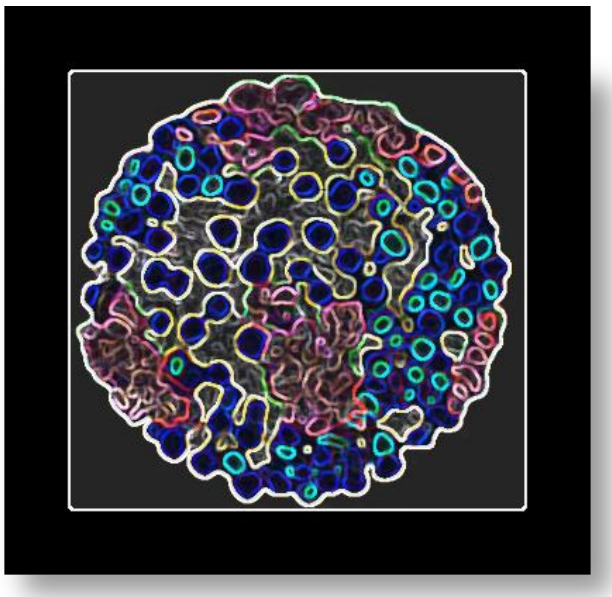
Information About Cold, Flu, and the COVID-19 Viruses:

Respiratory Viruses!

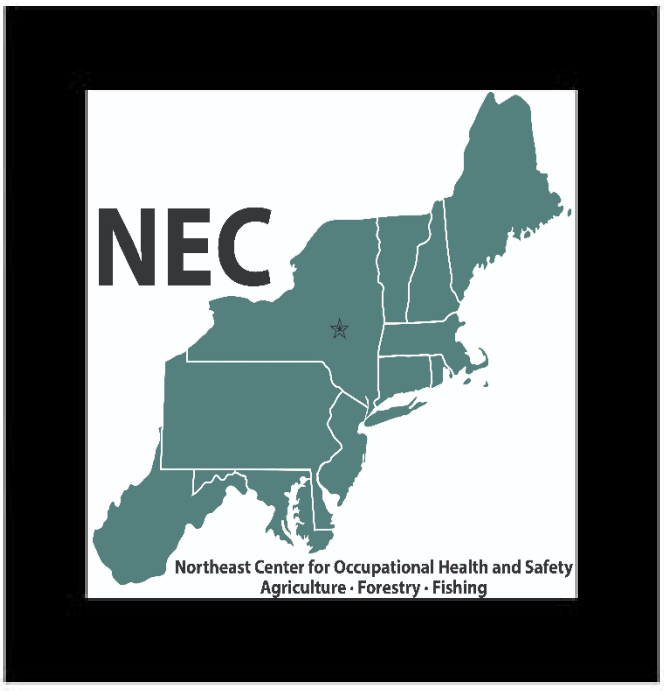
COLD Viruses

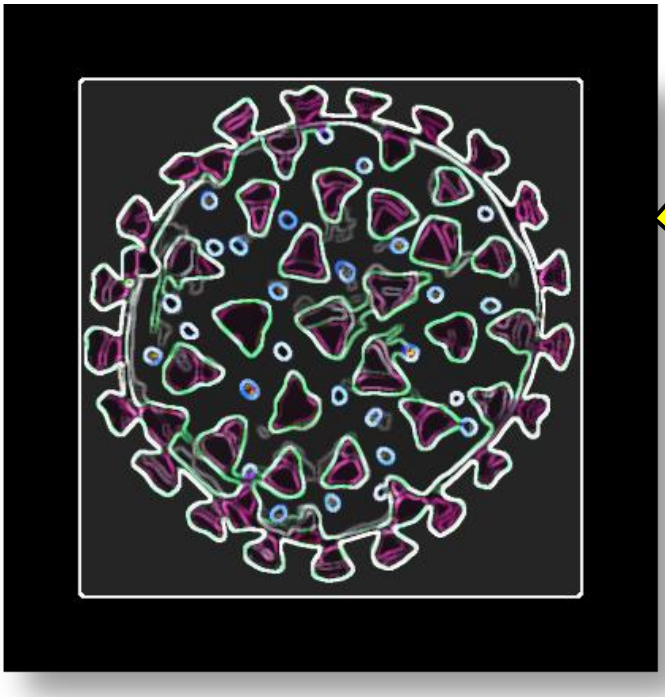


Flu Viruses



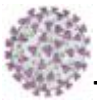
1 COVID-19 Virus  in 1 Body Cell + 1 Hour =





"Funding for this booklet was provided by the National Institute for Occupational Safety and Health (2U54OH007542) through the Northeast Center for Occupational Health and Safety: Agriculture, Forestry and Fishing.

Respiratory Virus Activity Booklet: Table of Content



This booklet is dedicated to the many families in the Plain Community who like all of us do not have time to be sick. Each year, many respiratory illnesses (cold and flu viruses) result in time lost from farm work, other jobs, school, as well as medical bills or the loss of a loved ones.

Respiratory illnesses occur every year especially in fall and winter.

The Spring of 2019, a new virus (COVID-19) has and continues to affect the health of citizens here in the United States and worldwide.

It is called a "pandemic" which means over a wide geographic area that affects a high percentage of people. This booklet has been created to help readers be aware of what they & their family can do to decrease respiratory illnesses that can result in mild to severe illness, life-alternating conditions, or death.

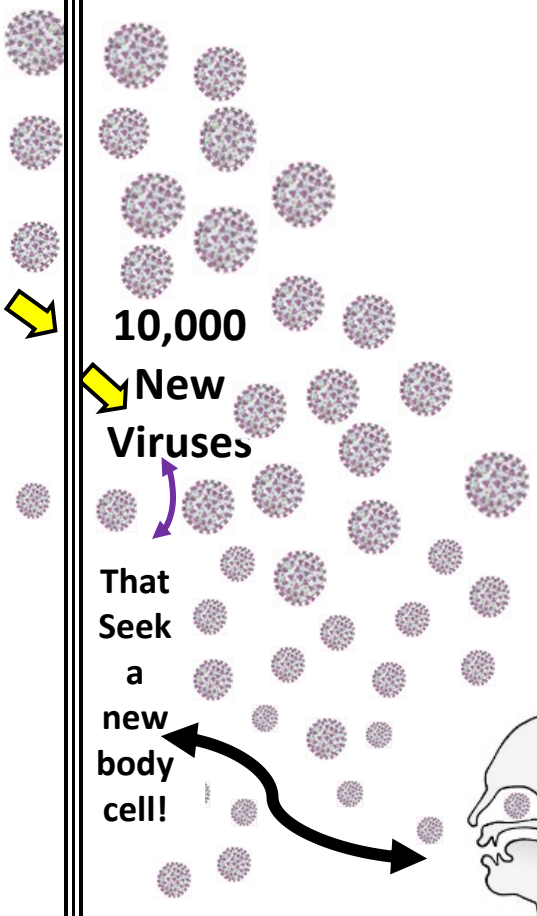
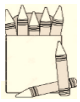
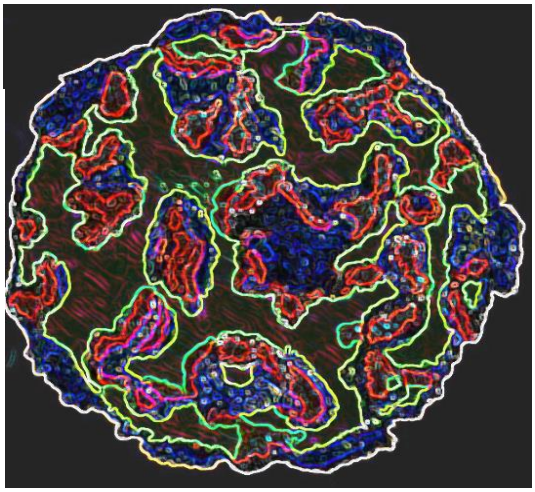


Table of Content: + Activity Pages



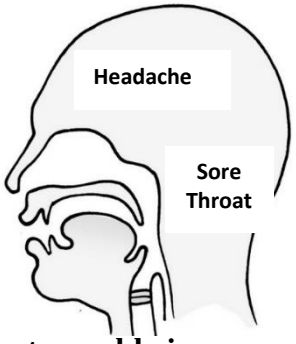
Compiled by Kay Moyer-Nurse Safety Educator
Call 717-394-6851 or 717-665-6219

Cold: A Respiratory Illness



Did You Know?

- Every year adults will have 2-3 colds. Children will have more.
- The name of the virus that causes a cold is-***rhinovirus***. [ˈrīnōvīrəs]
- A cold virus spreads through the air and can infect those in close contact with droplets from the nose and mouth.
- There are NO vaccines to prevent getting a cold.
- The cold virus is a major cause of asthma flare-ups.
- Cold symptoms include, a runny nose, sneezing, headaches, body aches, scratchy/sore throat, and drainage down into the lungs.



NOTE:

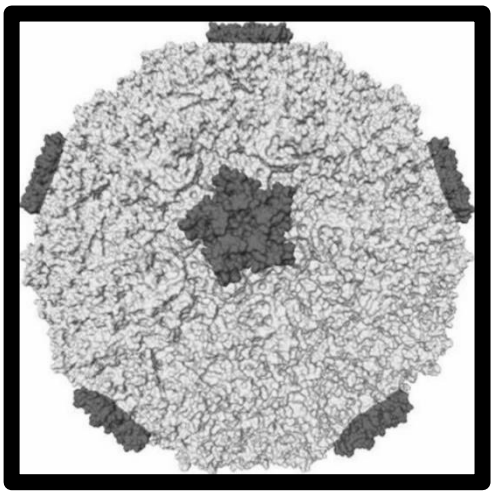
❖ Spread----

- A cold begins in 1-3 days after exposure to a cold viruses.
- There are about 200 different cold viruses.
- The virus attaches to the cells inside the nose and throat causing inflammation and feeling "miserable".
- Your body makes a protein called an antibody to that cold virus. The antibodies will destroy the virus. However, it takes 7-10 days to make enough antibodies to end the illness.

The good news—after a cold, your immune system will remember that virus. If you are exposed later to the same cold virus, your immune system will quickly make enough antibodies to destroy the virus before you become sick.

According to the Collins dictionary, antibodies are protein substances that the body produces (in the blood) to destroy germs.

The bad news—there are another 199 different cold viruses to go. Your immune system forms antibodies only after illness. Read more about antibodies on pages 21 & 22.



Color the flu virus.

Researchers Suggest:-

- The Rhinovirus virus duplicates better in cooler temperatures.
- When we are sick with a cold, it is better to keep your nose warm, because a cold virus makes more copies of itself in cold air.
- Germs make a person sick, not cold weather. Prevent exposure to a cold, flu, or COVID viruses to prevent getting sick.

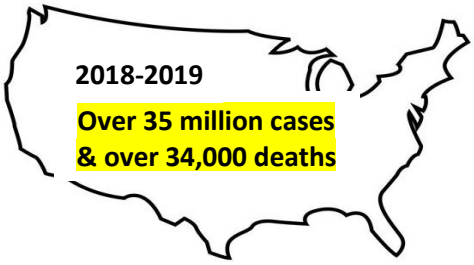
https://www.cdc.gov/dotw/common-cold/index.html

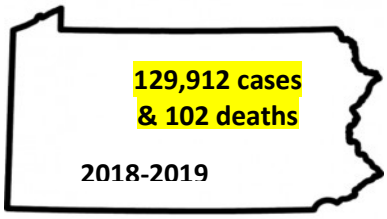
https://www.nih.gov/news-events/nih-research-matters/understanding-common-

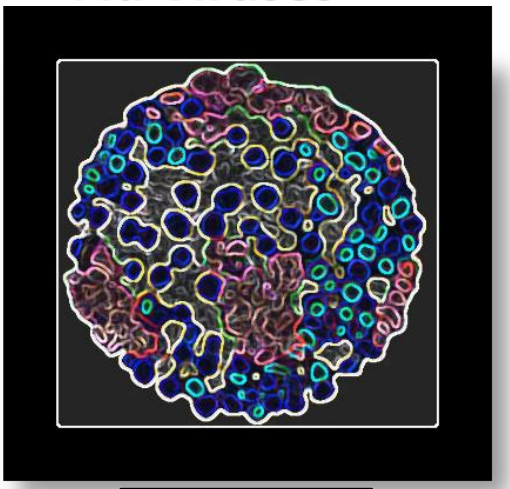
Influenza (flu) is a Respiratory Illness

Flu is:

- A contagious respiratory illness.
- Caused by an influenza virus: A, B, C, and D.
- The cause of mild to severe illness and deaths each year.





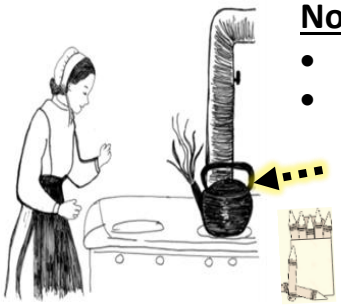


4 Flu Viruses: A, B, C, D

- The cause of fever, coughs, sore throat, runny-stuffy nose, & body aches.
- Spread by tiny droplets (liquid containing the virus) that escapes from the nose and mouth when coughing, talking, singing, or speaking.

Facts: The Flu Virus:

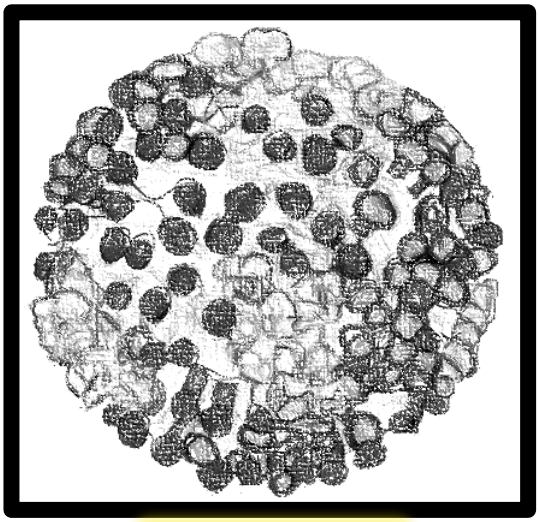
- Causes complications especially for those under age 5 and those 65 or older.
- Causes pneumonia, ear and sinus infections, and other complications.
- Can be spread 1 day before symptoms begin & up to 7 days after.
- Is most contagious in the first 3-5 days of illness. That is why mothers remind children to cover a cough or a sneeze. It is important to slow the spread to family members, school friends, and others when you are sick.



Note:

- The less moisture there is in the air, the happier the flu virus seems to be.
- The colder and drier the air, the more flu cases there seems to be.

Put a kettle on the stove to add moisture to the air.

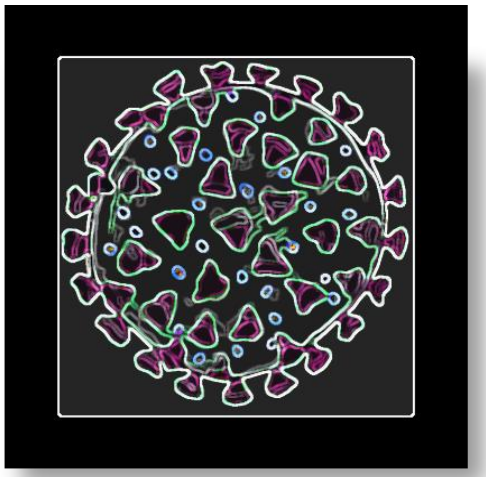


Color the flu virus.

Did You Know?

- A flu virus will stay in a room from minutes up to 24 hours. Someone sick should stay in a separate room.
- Flu germs live longer on hard surfaces: desks, tables, and doorknobs. Use a disinfectant cleaner frequently.
- Handshaking and then touching your face or breathing in germs from the air are 2 of the most common ways people are exposed to cold and flu germs.
- It is important to stay away from family members and consider not shaking hands when ill. You can bump elbows or wave for a few days, until you are not contagious.
- Covering a sneeze or cough and then washing for 20 seconds slows the spread of germs to others.

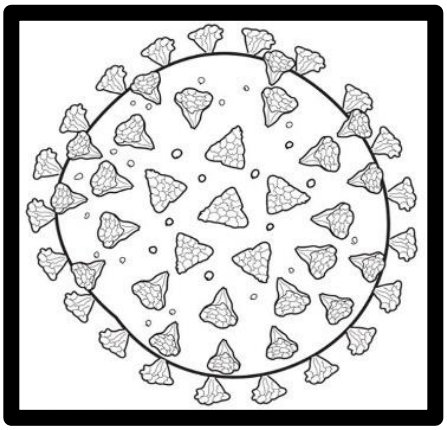
Facts About the COVID-19 A New Respiratory Virus



COVID-19 Virus

COVID-19
'Co' = CORONA
'VI' = VIRUS
'D' = DISEASE
'19' = 2019

The first cases of COVID-19 appeared in China late 2019. More contagious than a cold or flu virus.



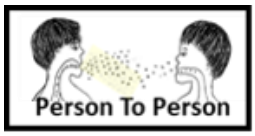
Color the flu virus.

Facts About the COVID-19 Respiratory Virus:

- Symptoms can be mild, moderate, or severe.
- Older adults & those with underlying medical conditions (heart, lung disease, diabetes, blood pressure) and those who are immune suppressed, seem to be at a higher risk for experiencing serious complications.
- Those who DO NOT SHOW SYMPTOMS BUT ARE INFECTED--can have the same amount of virus in their body, as people who test positive. They do not feel or look sick but can spread the virus to others.

https://askabiologist.asu.edu/memory-b-cell

The New COVID-19 Virus:



- Is spread from person-to-person (6 feet +).
- Is spread by droplets (tiny drops of liquid containing the virus) that escape when we talk, sing, cough, or sneeze.
- Can enter the body by hands that touch a contaminated surface & then touch nose, mouth, or eyes.
- Has a protein coating that Is able to enter the cells inside our nose, mouth, or eyes.
- Multiplies after entrance into a body cell and in hours 10,000 + viruses escape to seek another body cell.
- Can be spread to others by someone who is (asymptomatic).

Have you heard the term Asymptomatic?

https://medical-dictionary.thefreedictionary.com/asymptomatic

- Asymptomatic---without symptoms.
- The person has the virus inside them and can infect others, but they do not look or feel sick.
- Did you know that approximately 40-45% of COVID cases are spread by asymptomatic infected people?

https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.

After exposure, symptoms slowly appear in 2-14 days and can include:

- *Fever or chills*
- *Cough*
- *Shortness of breath or difficulty breathing*
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

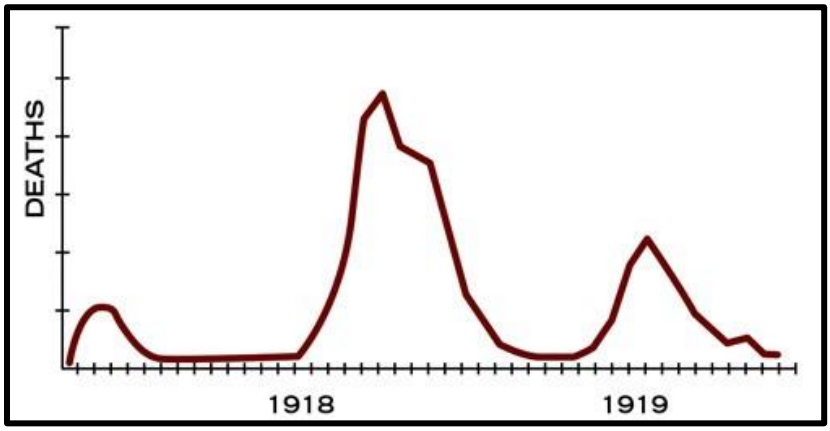
***If the person has difficulty breathing, memory loss, or other symptoms, Call 911 and tell them the person may have COVID illness.**

The "1918 Flu"

Unless you are over 100 years old, you may not know much about the "Pandemic of 1918". The 1918 flu was caused by an H1N1 virus.

It spread worldwide and it is estimated that about one-third of the world's population was affected by this virus.

In fact, at least 50 million people worldwide were infected, and 675,000 people died, many who were young people in their 20-40.



March 1918 Fall/Winter 1918 Winter/Spring 1919

Children under 5 years old, 20-40-year-old people, and 65 years and older were at high-risk of getting the flu and dying, often in hours.

There was no vaccine or antibiotics to prevent deaths which were caused by bacterial pneumonia.

Researchers did not know what was causing the illness since the virus was not able to be viewed until 1930 when electronic microscopes were developed.

https://learningaboutpandemic.weebly.com/1918-influenza-timeline.html

https://www.cdc.gov/coronavirus/2019-nCoV/index.html

https://www.cdc.gov/flu/about/keyfacts.htm

There were 3 different waves of illness starting in March 1918.

Most of the deaths occurred in the 2nd wave. The virus changed into a more lethal germ.

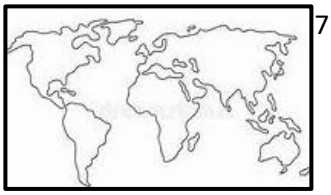
The 3rd wave of illness occurred during the winter and spring of 1919.

Table 1. Influenza Pandemics Over The Past 100 Years

Years	Name	Subtype	Extent of Outbreak
1918–1919	Spanish flu	H1N1	Estimated deaths: USA: 675,000 Worldwide: 50 million
1957–1958	Asian flu	H2N2	Estimated deaths: USA: 70,000 Worldwide: 1 to 2 million
1968–1969	Hong Kong flu	H3N2	Estimated deaths: USA: 34,000 Worldwide: 700,000
2009–present	Swine flu	H1N1	Ongoing pandemic

https://www.cdc.gov/flu/pandemic-resources/1918-commemoration/1918-pandemic-history.htm

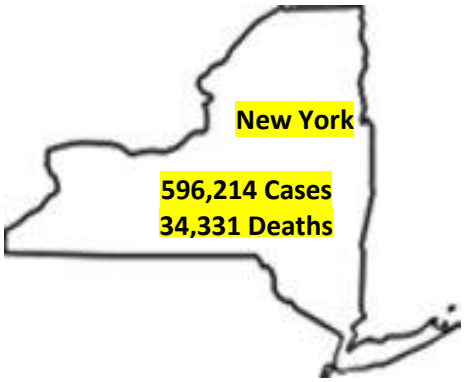
COVID-19: A NEW Respiratory Virus

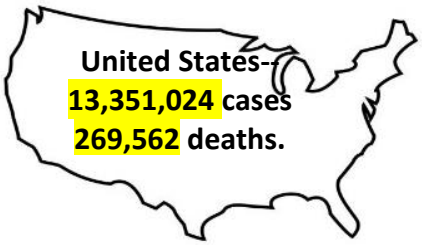


A new respiratory virus has appeared late 2019 and continues today. The cause of this pandemic is a coronavirus (a large family of viruses that cause respiratory illness) known as COVID-19.

Note the number of cases and deaths as of _____.

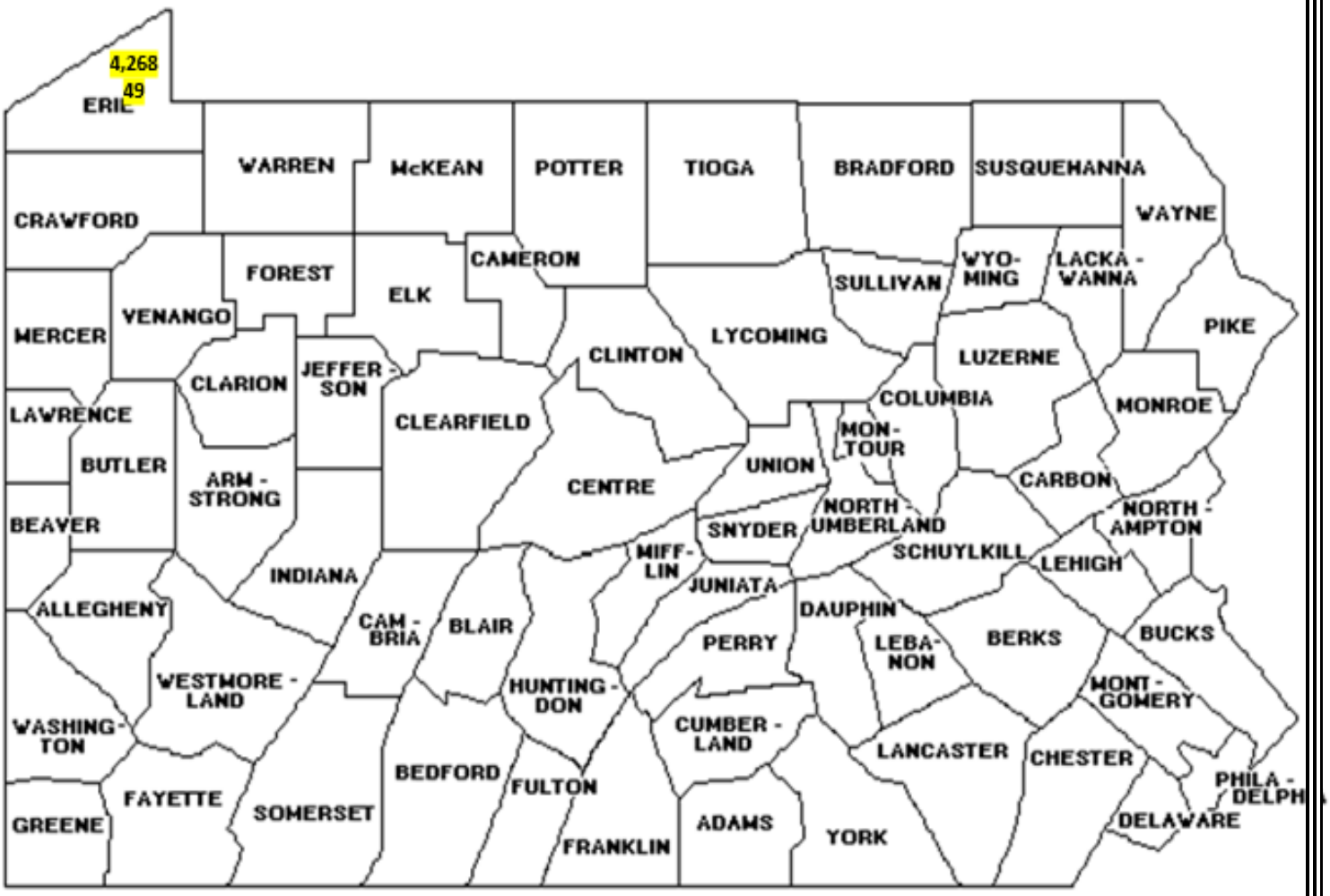
Worldwide---54,200,000 cases --- 1,310,000 (1.31 million deaths).





Will update near sending to print & plan to put in all cases/deaths in the map

In Pennsylvania--356,243 cases-----10,336 deaths.



Many who survive a COVID illness:

- **Need extensive hospital care (some were in a month or more).**
- **Need a longer time to recover compared to the flu-weeks, months, or longer.**
- **Were left with life-long physical and/or mental handicaps---damaged to heart, kidney, brain, or lungs.**
- **Have physical problems "Long" after the person is not infected as per Dr. Fauci..**

COVID-19 that's worrying experts even after people recover (msn.com)

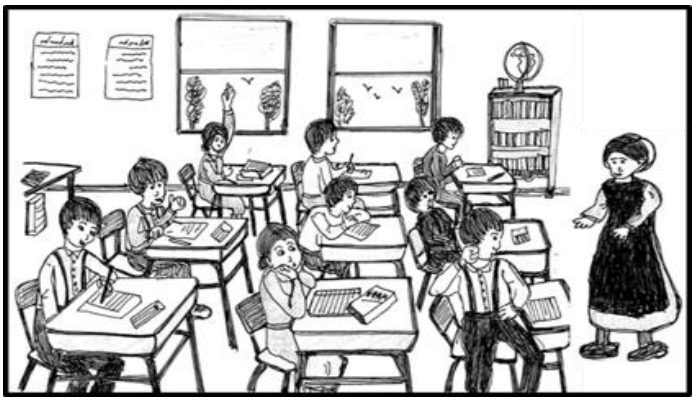
COVID-19: A NEW Respiratory Virus Continued

Over 1,000 nurses and doctors got sick and lost their life caring for patients?

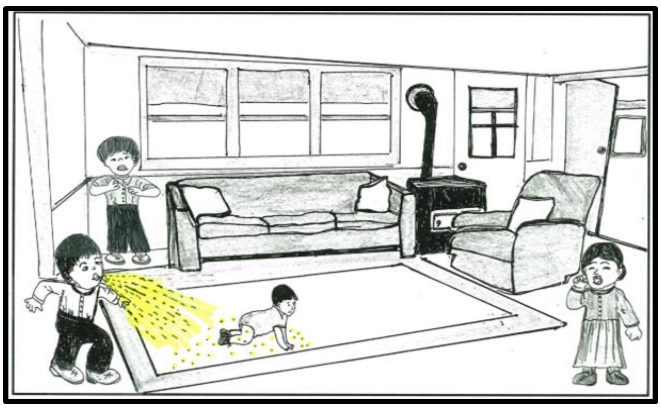
We are thankful for all the nurses and doctors who day after day give very sick patients, many on a ventilator, expert care. The best way to "Thank Them" for their sacrifice is to use preventative actions to prevent needing medical care for a COVID infection.

You might have heard people say, "I'm tired of staying at home" or "I don't want to hear more about COVID-19". However, respiratory viruses do not just go away, they cause illness each year fall to spring.

Some reasons cold, flu, and COVID illness occur more in the fall through spring Include:



- **We spend more time during cold weather indoors, in close contact to others.**
- **Windows and doors are kept closed, so there is less ventilation, which results in a higher concentration of viruses in homes, schools, stores, and worksites.**



- **Winter heat makes the air dry, which is what a cold, flu, or COVID viruses like. So, put a kettle of water on the stove to add some moisture to the room.**

- **Having a weakened immune system from a recent cold or flu, will increase the risk of a severe illness if exposed to the COVID-19 virus.**

Did you know that some people were infected with COVID a second time?

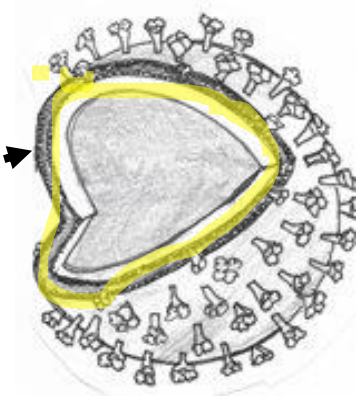
- **A new study released November 20, 2020 by the Oxford University in England, showed that people who recover from a COVID infection *do have* protective antibodies (Memory Cells) in there blood, that will recognize and destroy a COVID virus. *The question is how long?***
- **This new research indicates that antibodies to COVID only last around 6 months after illness. (COVID-19 reinfection unlikely for at least six months after recovery, study finds - UPI.com)**
- **Some diseases (like measles) may result in a life-time immunity, but several studies show there is no lasting immunity (only a few months) after surviving a COVID illness.**
- **A COVID vaccine, could provide antibody protection to prevent COVID illnesses.**

https://www.cdc.gov/flu/about/keyfacts.htm

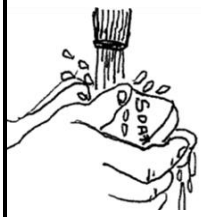
https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations. https://askabiologist.asu.edu/memory-b-cell

The summary below has been adapted from a community chat about COVID-19 virus. The chat was written up by an Assistant Professor from the Infectious disease department at John Hopkins University.

The New COVID-19 virus is:



- **Not a living organism and can only multiplies after it enters a body cell.**
  - **A protein molecule covered by a protective layer of lipid (fat*).***
  - **Able to attach to *cells in our eyes, mouth, and nose where it enters a the cell and multiplies.***
  - **Not killed, but it decays on its own, depending on the temperature, humidity, and type of material where the virus lands.**

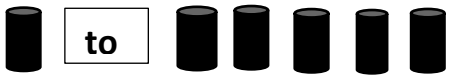


  - **Very fragile; the only thing that protect it, is a thin layer of fat. That is why any soap or detergent is the best remedy. Soap (CUTS the fat). In 20 seconds, soap and water breaks down the virus before it can attach and multiply.**

  - **HEAT melts fat. That is why it is a good idea to use hot water when washing hands, clothes, and surfaces. Hot water makes more foam which is more effective in dissolving the fat protective covering.**

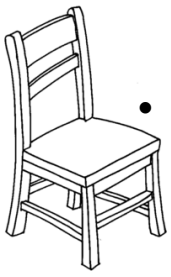
  - **Broken down by alcohol or any mixture with alcohol over 60%. Alcohol *DISSOLVES ANY FAT*, especially the protective lipid layer of the virus.**
  - **Any mix of 1-part bleach and 5-parts water will dissolve the protein (fat) layer & breaks the virus down from the inside.**

Dissolve the fat protective layer: Destroy the virus!

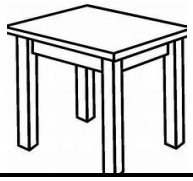


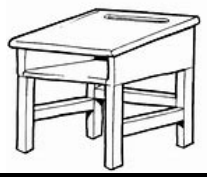
Bleach **Water**

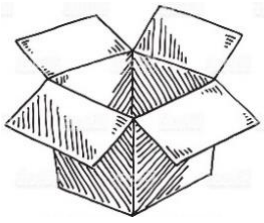
  - **Able to be picked up on hands & transferred to your nose, mouth, and eyes,**
  - **Not destroyed by a BACTERICIDE because a virus is not a living organism as is a bacterium. Antibiotics cannot destroy a virus; only bacterial infections respond to antibiotics.**



  - **Not broken down quickly when the virus lands on surfaces in the environment. The virus can be on surfaces for hours: 3 hours *(fabric and porous surfaces),* 4 hours *(copper and wood),* 42 hours *(metal)* and 72 hours *(plastic).***

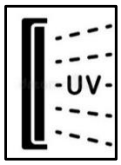




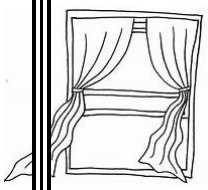


John Hopkins University Summary Continued

- **Able to float in the air (If you shake or use a feather duster) up to 3 hours and can lodge and attach to cells in our nose, eyes, and mouth.**
- **<u>Very stable</u> (not broken down) in <u>external cold</u> and in <u>air-conditioned</u> homes, work sites, and even in air-conditioned cars or trucks.**
- **<u>Very stable (not destroyed or broken down)</u> if the environment is <u>dry and warm.</u>**
- **<u>Very stable in an</u> environment that <u>is dark</u>.**
- **Broken down when the virus is exposed to UV light.**

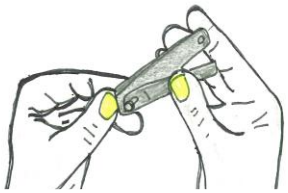


- **Not able to go through healthy skin.**
- ***<u>Not destroyed by VINEGAR</u>* because vinegar <u>does not dissolve the fat layer.</u>**
- **More concentrated in a confined small space (like a school room or small workshop) than a bigger space like a barn, shed, or big building.**



- **<u>Found in less amounts</u> in an environment where there is more <u>natural VENTILATION).</u>**
- **Able to hide in small cracks in hands. Keeping hands moisturized prevents the virus molecules from hiding in the small cracks.**

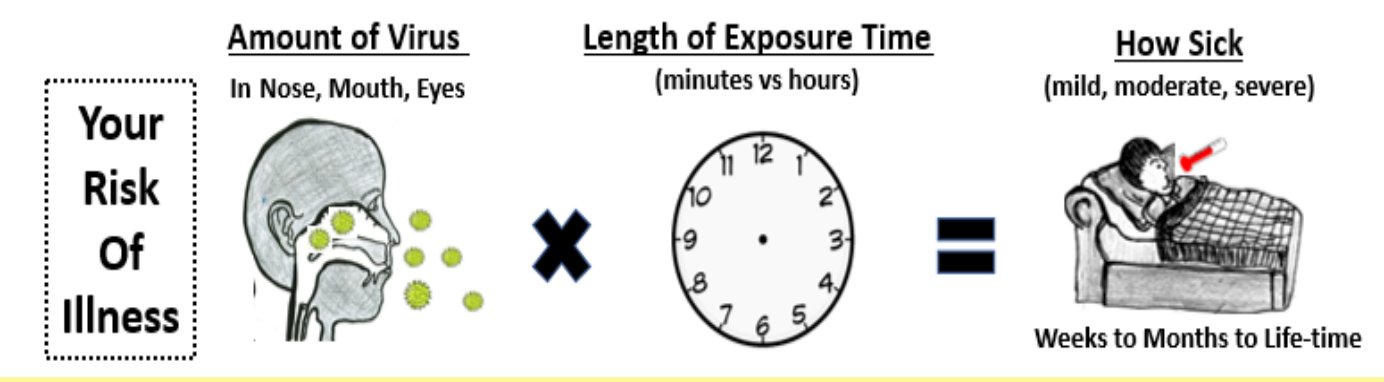
- **Able to live under fingernails, so *<u>keep your NAILS short</u>* so the virus cannot hide there.**



❖ **Research shows that**

the *<u>amount of virus</u>* X the *<u>length of exposure time</u>* =

<u>how sick a person will become.</u>



https://www.ctvnews.ca/health/coronavirus/prolonged-time-exposed-to-virus=a=factor-in-infection-1.4944021

A True Story: How One Person Spread COVID-19

Centers for Disease Control and Prevention (CDC) reported that in Washington state, one person sick with COVID-19 virus attended a 2 & ½ hours of choir practice in March. Here is what happened.

There were 61 people who attended, and 43 people (87%) became ill with COVID-19.

61 @ Choir Practice for 2 &1/2 hours + 1 sick COVID Virus = 43 Ill out of the 61.

There was:

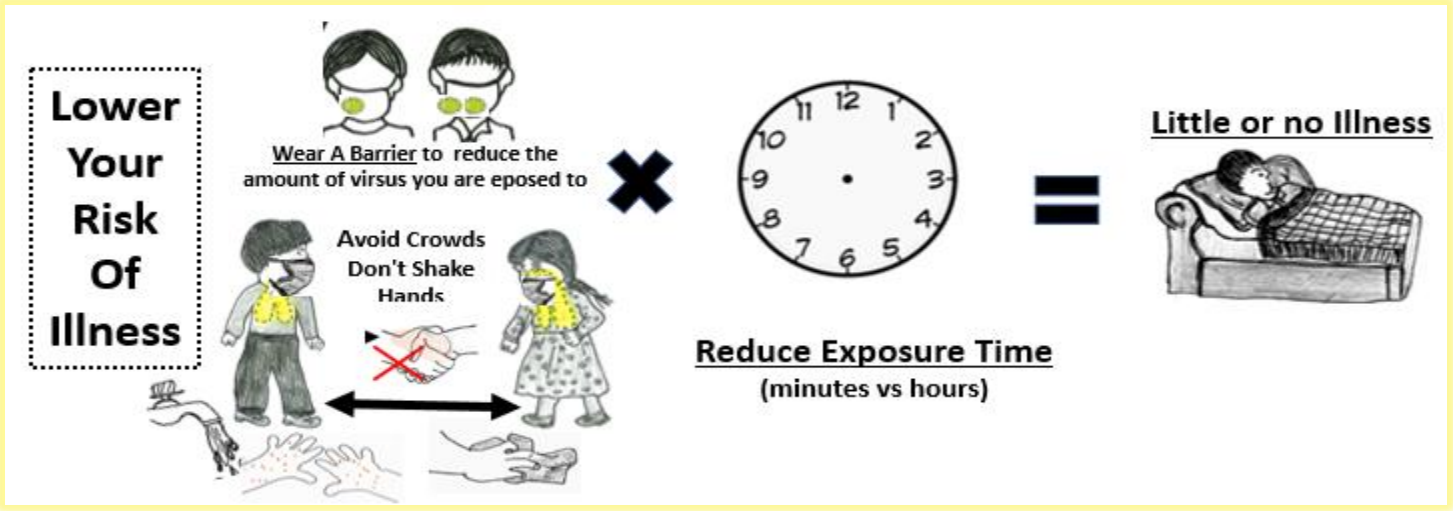
- **No physical contact between each person, but they sat close together.**
- **The chairs were 6-10 inches apart, only a few seats were kept empty between chairs.**
- **The choir broke into 2 groups and had close contact for 45 minutes.**

Respiratory viruses:

- **Escapes from nose & mouth in small droplets (tiny drops of liquid containing a virus)**
- **Exits mouth when singing, talking, yelling, coughing, sneezing, or just breathing.**
- **Bigger droplets drop towards the floor.**
- **Smaller and tiny droplets can be found in the air vapor.**
- **Small droplets can remain in the air up to 3 hours.**

Key factor in being exposed and infected by a respiratory virus include:

- **The amount of *time you are exposed* (risk is less with 5 minutes vs 30 or more.**
- **The amount or *intensity of the exposure* (how close you are to the ill person).**
- **The *amount of virus shed by a person at the time of exposure*.**

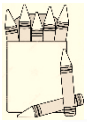


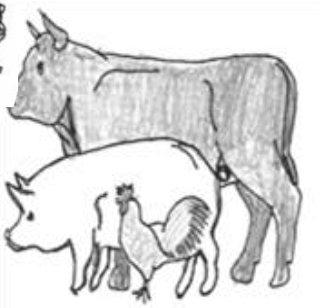
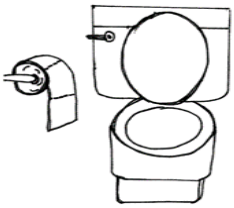
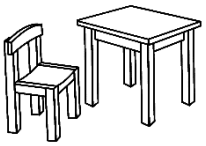
Germs Are Everywhere:

- In food
- In the air
- In water
- In the soil
- In our mouth
- Inside our body
- On our skin
- On the fur of pets & animals
- On toys
- On doorknobs
- On the floor
- On the toilet
- On tables and chairs
- On school desks
- On pencils, books, papers, and pens
- On our clothing
- On Our 10 fingers and hands








Did You Know?

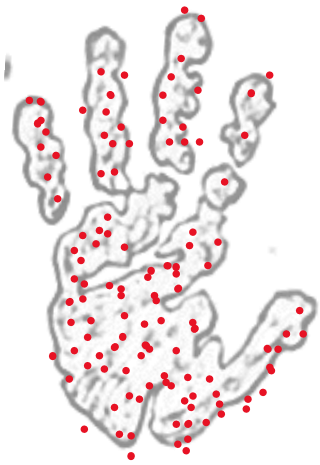
1,000 germs can live on a pencil easer

There are 300 different types of bacteria living on a dollar bill.

Germs can be found on:

- Fruits and vegetables that are not washed.
- Raw fish and raw meats.
- Hands you shake or on someone's cup or drinking glass.
- Dogs, cats, and animals.
- Chairs, sofas, tables, floors, rugs, books, and desks.

At any given time, a human hand, may contain as many as 5,000 germs.



Germs can:

- Get into your body through a cut.
- Ride into your body on something you eat.
- Float in the air you breathe.
- Wait until you get germs on your hands and you touch your nose, mouth, or eyes before washing.

Germs Are Tiny Living Things

Germs (bacteria or viruses) are so small that <u>we cannot see them</u> with our eyes, a magnifying glass, or even with a microscope.

Some germs can only be seen by using an electronic microscope (uses a beam of electrons rather than light).

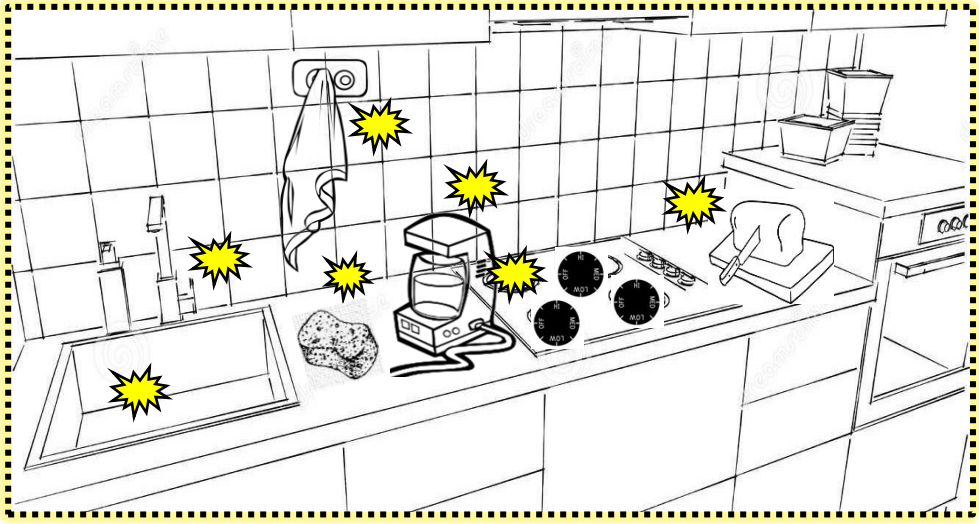
Germs are invisible, meaning we cannot see them with our eyes or a magnifying glass.

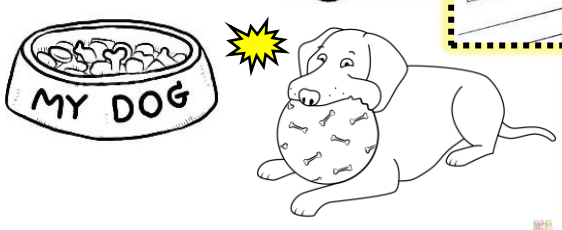
<u>The 10 areas in your home with the most germs include:</u>

- ✓ Sponges & dish rags
- ✓ Kitchen sinks
- ✓ Toothbrush holders
- ✓ Pet bowls
- ✓ Coffee makers
- ✓ Faucet handles
- ✓ Pet toys
- ✓ Kitchen counters
- ✓ Stove knobs
- ✓ Cutting boards.

Did You Know?

Interestingly, toilets are not even on the top 10 list of "germiest" places in the home!





Fill in the Blank Activity! Use the Words Found on the Right

1. Germs can make you _____.
2. Germs are _____.
3. Germs travel in the _____.
4. Cover a _____ or sneeze.
5. Stop the spread of germs by _____ your hands.
6. Eat healthy _____.
7. Drink lots of _____.
8. Brush germs and food from your _____ to prevent getting a cavity.
9. Wash germs from your hands before _____.
10. Wash germs from your hands after using the _____.
11. Drink water during the day to rinse food and _____from your teeth.
12. What 10 things spread the most germs? Our 10 _____.

- AIR
- EATING
- FOODS
- TEETH
- BATHROOM
- EVERYWHERE
- GERMS
- WASHING
- COUGH
- FINGERS
- SICK
- WATER

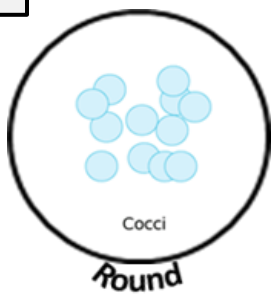
Germs Search-A-Word Using the Same Words.

V	E	R	I	A	Z	F	W	W	T	A	I	O	X	B
S	B	V	S	E	I	X	A	M	S	E	L	M	T	A
C	X	I	E	N	R	S	T	V	K	M	E	T	M	T
Y	C	J	G	R	A	S	E	L	P	C	G	T	N	H
K	J	E	F	S	Y	D	R	P	G	N	O	O	H	R
W	R	H	D	M	F	W	G	O	T	I	F	U	V	O
S	G	O	E	G	N	I	H	S	A	W	Z	K	N	O
U	O	B	J	V	H	O	H	E	G	T	E	R	R	M
F	W	A	Y	H	G	O	Q	A	R	I	S	S	H	C
T	S	E	F	G	K	N	U	C	C	E	E	R	C	K
K	Q	I	O	U	M	A	I	W	F	C	U	U	W	F
N	N	A	W	O	M	L	L	T	I	X	Q	Q	U	X
B	O	S	B	C	T	U	C	W	A	Q	Q	O	W	A
T	S	J	Z	U	Z	J	M	Q	G	E	R	M	S	O
U	D	J	N	P	W	B	I	T	Z	J	O	U	S	P

Bacteria Are Germs

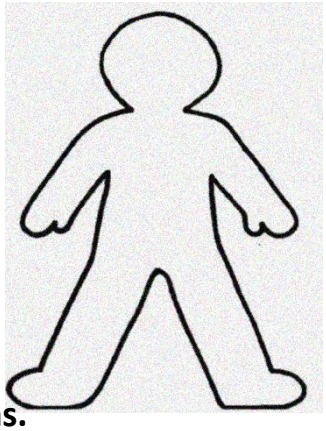
Bacteria

Bacteria



Bacteria

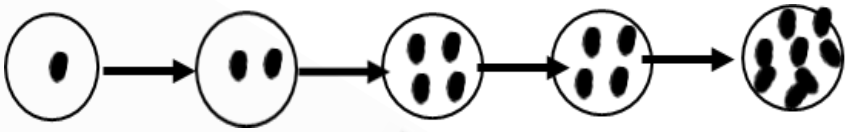
Your body has about 4 pounds of bacteria?



Did you know?

In just a few hours, one germ (bacterium) can turn into a million germs.

One bacteria will divide into 2. Two divides into 4 and soon the 4 divides into 8.



There are 2-10 million bacteria from fingertips to elbow, that's just on 1 arm.

Good Bacterial Flora

BIFIDOBACTERIA
The various strains help to regulate levels of other bacteria in the gut, modulate immune responses to invading pathogens, prevent tumour formation and produce vitamins.

ESCHERICHIA COLI
Several types inhabit the human gut. They are involved in the production of vitamin K2 (essential for blood clotting) and help to keep bad bacteria in check. But some strains can lead to illness.

LACTOBACILLI
Beneficial varieties produce vitamins and nutrients, boost immunity and protect against carcinogens.

https://healamed.com/images/stories/statia/nutrition/good-bacteria.jpg

Not all bacteria make us sick!

There are millions of good bacteria in our stomach and intestines. Good bacteria help us break down starches and food that are difficult to digest. If we did not have good bacteria to help absorb minerals and vitamins, we would be tired, feel ill and have stomach discomfort.

Bacteria are Giants Compared to a Virus

The smallest bacteria are about 0.4 micron (one millionth of a meter) in diameter.
A virus ranges in size from 0.4 to 0.25 micron.
Bacterium or viruses can only be seen with a powerful microscope, like an electronic microscope.

If you imagine a bacterium is the size of a school bus,

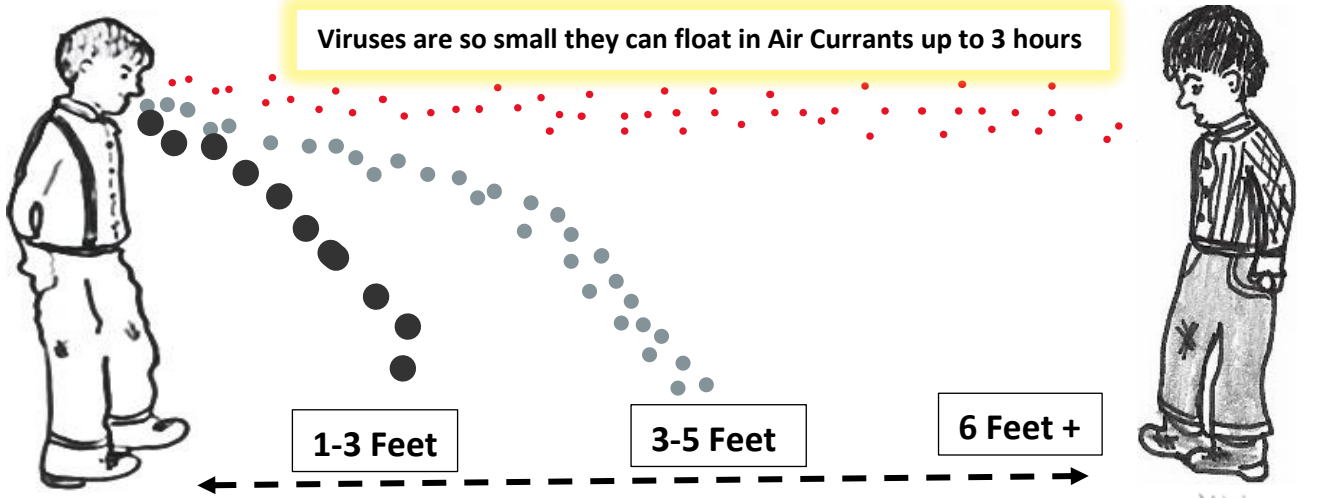
then the largest virus would be the size of a bike.

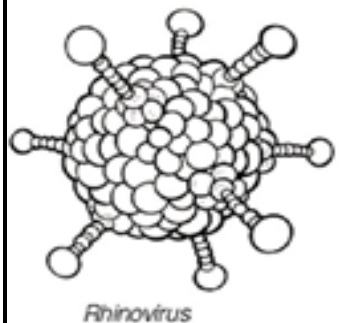
Note: *most viruses would be the size of a small tricycle.*

https://www.merriam-webster.com/words-at-play/virus-vs-bacteria-difference

https://study.com/academy/lesson/difference-between-viruses-bacteria-lesson-for-kids.html

Maybe their small size is why a virus will travel further than a heavier bacterium.




Rhinovirus

Viruses Are Germs

There are over 200 different cold viruses.

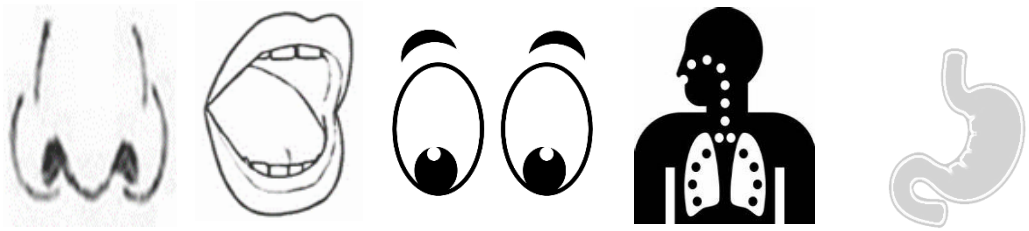

Rubella virus

Colds, flu, measles, mumps, and chickenpox are just some of the illnesses caused by viruses.

There are 4 different flu viruses: A, B, C, and D.

Viruses Do Not Divide

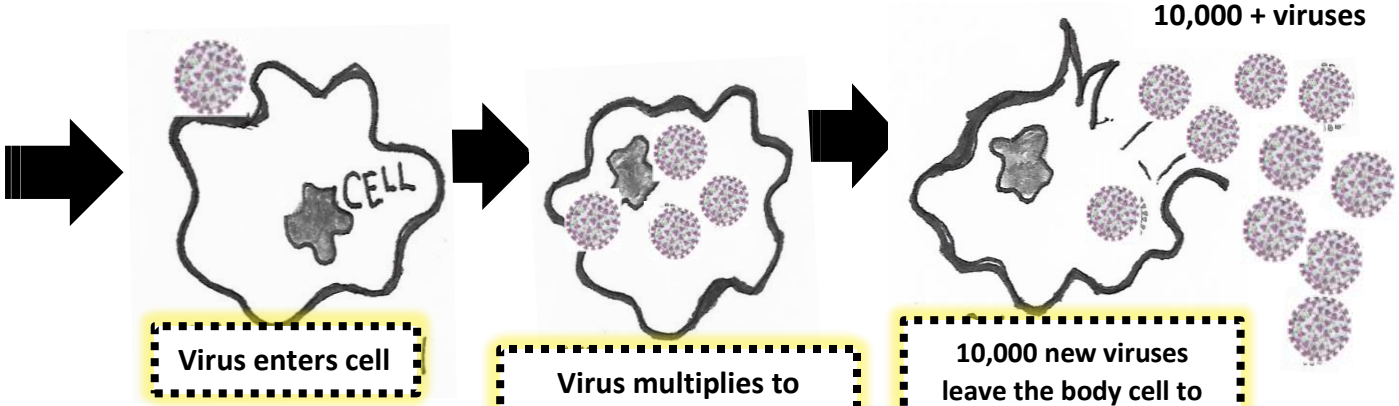
A virus goes inside a healthy body cell and multiplies, making many more viruses. Eventually the cell breaks open and each new virus looks for another body cell to attach to and multiply.



Enters Cells in Nose, Mouth, Eyes & Goes to Lungs/Stomach

Virus Grows & Multiplies

New Viruses Escape



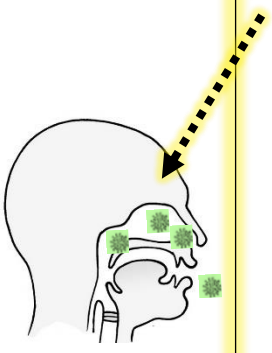
Note:

One sneeze containing droplets of 1,000 COVID-19 particles could:

- **Multiply to 30,000 new virus particles released when the body cell breaks open to seek another cell to enter.**
- **Multiply to 900,000 in the next round and this continues overtaking the body.**

https://www.webmd.com/lung/news/20200423/the-great-invader-how-covid-attacks-every-organ

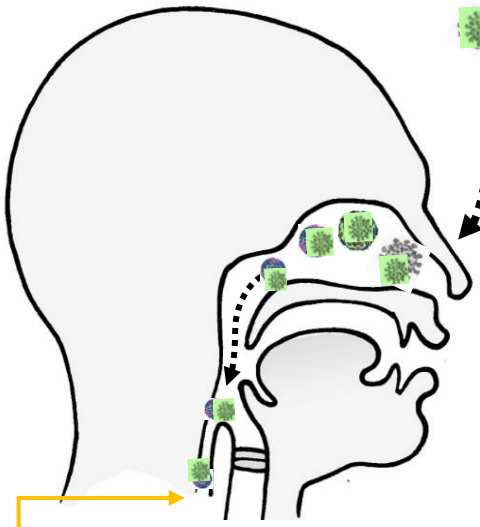
The COVID-19 virus is dangerous because the virus:



- **Is very *effective at entering the cells* in our nose and upper respiratory system.**
- ***Prevents early distress signals* that communicate to your body that something is wrong, like a fever or feeling tired.**
- ***Prevents your immune system* from knowing that *an invader has entered and is rapidly multiplying.***
- **Can cause the immune system to *overreact, resulting in excessive tissue inflammation and multiple organ damage***

Note: The amount of virus particles you are exposed to can affect how likely you are to have a mild, moderate, or severe illness?

Respiratory Viruses Attach to the Cells Inside Your Nose

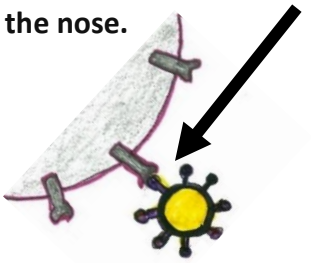


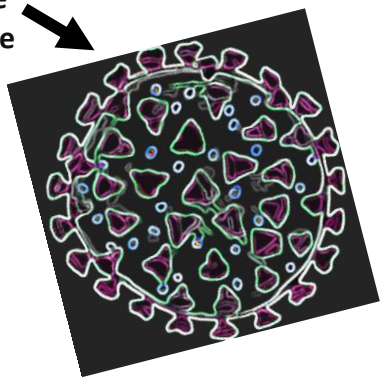
Respiratory viruses (cold, flu, & COVID) seek out the cells found right inside our nose.

Those viruses can also gain entrance through our mouth and eyes, but the virus loves the cells inside your nose.

WHY?

The virus has a protein on the spike that is the right fit to the cells inside the nose.





After it attaches to a body cell, a cold, flu, or COVID virus takes over the cell and uses the cell contents to multiply (make copies of itself). So many copies are made that the cell breaks open and each new virus seeks another body cell to enter to duplicate.

Question? ***How many copies of itself can a virus make in just hours?***

Put an X at your best answer.

	1,000 viruses
	3,000 viruses
	5,000 viruses
	10,000 viruses

Answer: 10,000

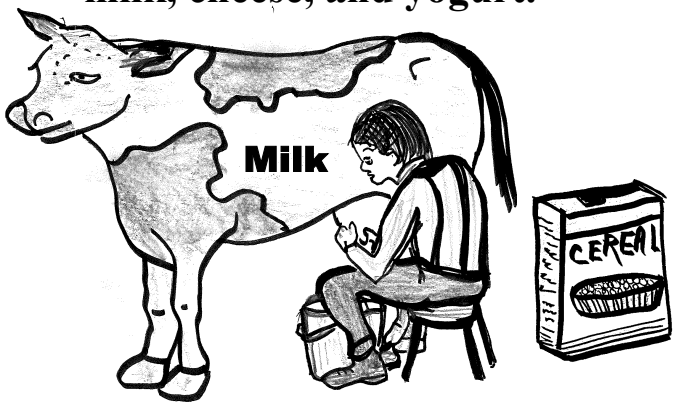
Did you know? After the virus multiplies, some leave the nose and mouth (in saliva or mucus) and land in the lungs.

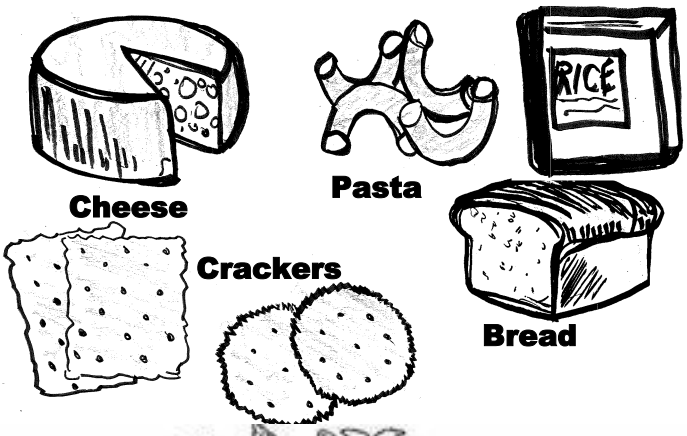
Wearing even a non-medical mask, blocks most large virus-carrying droplets that are expelled in the air by a cough or sneeze.

A barrier blocks the large droplets so they cannot land or enter in someone's nose, mouth, or eyes.
Wear a barrier when you are out in public.

Boost Your Immune System: Fight-off Respiratory Viruses

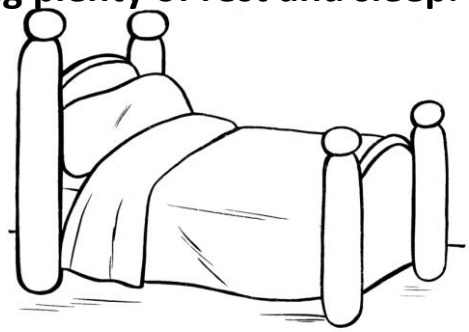
- **Eating healthy foods: fruit & vegetables, lean meats, milk, cheese, and yogurt.**





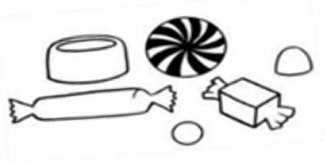
- **Drinking lots of water.**

- **Getting plenty of rest and sleep.**



- **Getting plenty of fresh air and exercise.**

- **Eating less sugary treats and sweets.**

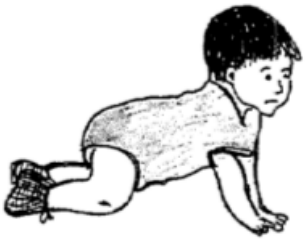


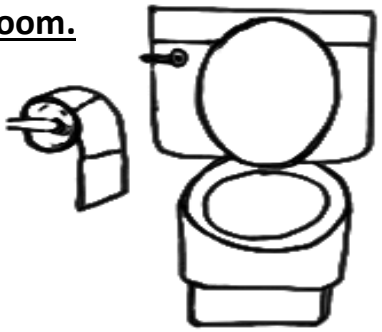
Boost Your Immune System—continued

- **Brush your teeth 2 times a day.**

- **Wash your hands before eating or making food.**

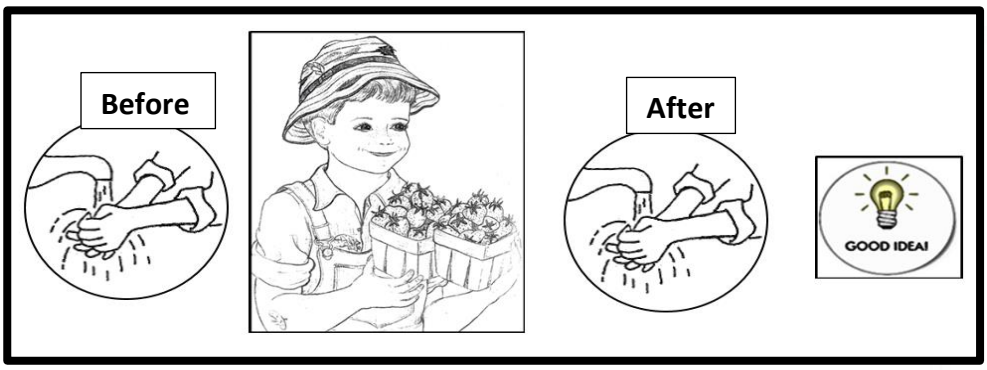
- **Wash your hands after <u>diapering a child or after using the bathroom.</u>**

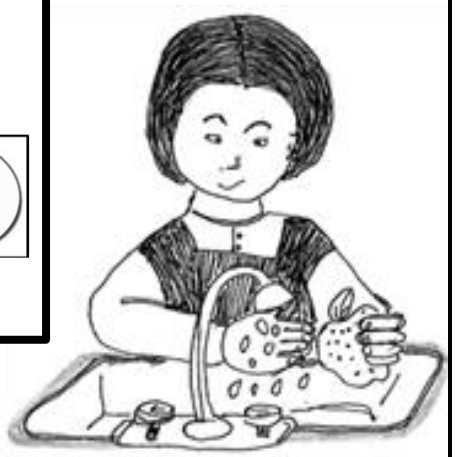




- **Wash your hands <u>before and after picking</u> fruits and vegetables. Wash produce from a roadside stand or the store before eating to reduce any germs or pesticide residue.**

NOTE: **It is not safe to eat vegetables and fruits while picking produce.**





Be Food Safe!

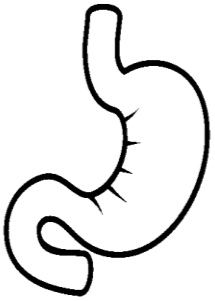
Your Body's Immune System

Did you know that your body has a network of cells, body tissues, and organs that work together to protect you from getting sick?
Below is a list of how the body uses barriers to prevent you getting ill.

- **Your skin.** **Skin prevents fluids from escaping the body. Skin is a barrier to keep germs from entering and causing infections.**

- **Your nose.** **Your nose has hairs inside that catch dust and germs before they can get into your lungs. The germs and dust tickle your nose inside, causing you to sneeze them out.**

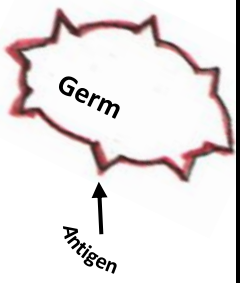
- **Your mouth.** **Your mouth and throat are wet with saliva. Some germs get stuck in the saliva, trapping them so they can't get to your lungs.**



- **Your stomach.** **Your stomach has an acid that will kill germs that cause diarrhea and vomiting, unless you eat or drink a huge number of germs.**

- **Fever.** **Fever is one way your body fights infection. Bacteria and viruses are heat sensitive. Some fever is needed to help destroy the germs, but children may seizure when they have an extremely high fever.**

Your Body Has Special Cells That Fight Germs (Bacteria or Virus).



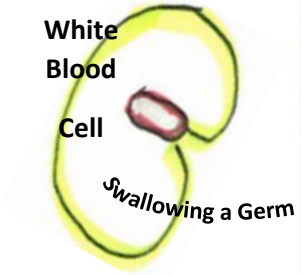
Your body recognizes a germ (bacteria or virus) as a "foreign invader".

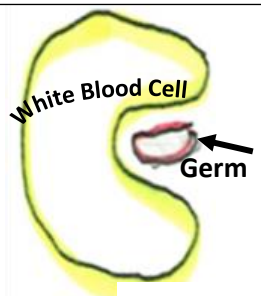
A protein on the surface of a bacteria, virus, fungi, or parasite is called an antigen.

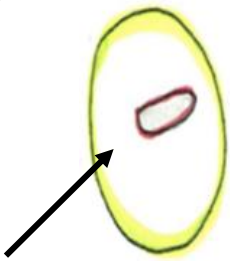
Each germ (bacteria, viruses, fungi, or parasite) has a unique and different antigen.

Your Body Produces White Blood Cells That Fight Germs.

White blood cells engulf or swallow up the germs and prevent them from multiplying.







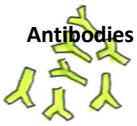
Germ destroyed by white blood cell.

How Your Body Destroys Germs

"Plasma Cell"

Recognizes
foreign antigen (germ)
& makes antibodies that destroy the infection!

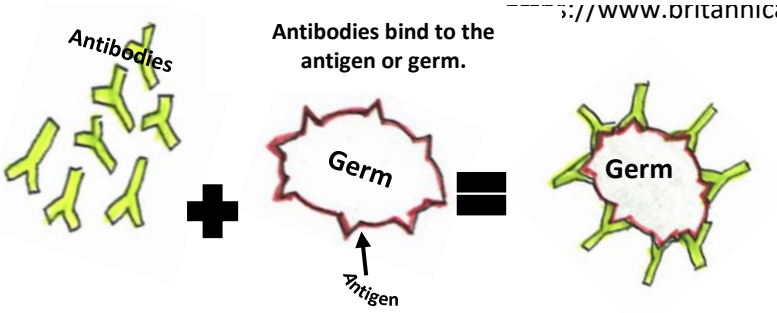
When a cold, flu, or the COVID virus attaches to the cells inside your nose, throat, or eyes, causing your body to fight the virus by making **antibodies.** The antibodies are taken to the infection site by plasma cells in the blood stream



According to the dictionary, an antibody is a protective protein produced by your immune system in response to an antigen (germ).

Antibodies are Y shaped proteins that help the antigen (germs) clump together.

https://www.britannica.com/science/antibody



The faster your body produces antibodies, the faster the germ is destroyed.

"Memory B Cell"
Remember
foreign antigen (germ) & alerts immune system to support a quick antibody response to end infection!

The first time your body fights a germ, it can take up to 15 days to make enough antibodies to defeat the invading germ. With the help of Memory B Cells, the next time your body is exposed to the same germ, your body can defeat the germ in about 5 days. It takes about 100 times more antibodies than it did the first time. Memory B Cells quickly produce antibodies so there is very little, or no illness and the disease-causing bacteria or virus does not cause illness.

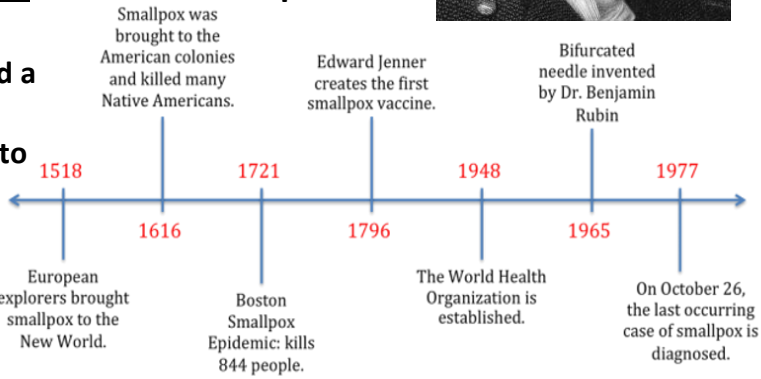
The Story of Smallpox.

Edward Jenner: first doctor to vaccinate people against smallpox. He developed the world's first vaccine and saved millions of lives.

Did you know that in 1518, smallpox caused the deaths of about 4 million Aztec Indians?

Smallpox:

- Is a virus.
- Was brought to America by European explores.
- **Probably killed more people in the history of the world than all other infectious diseases combined.**
- **About 300 million people worldwide** died from smallpox.
- Illness began in 2-5 days after exposure.
- Caused high fever, backache, fatigue, and a rash inside the mouth.
- The red flat rash developed into blisters to scabs that left scares all over the body.

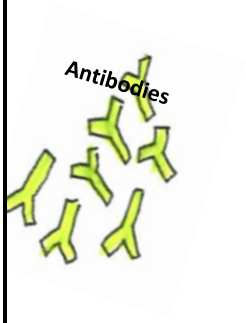


https://askabiologist.asu.edu/memory-b-cell

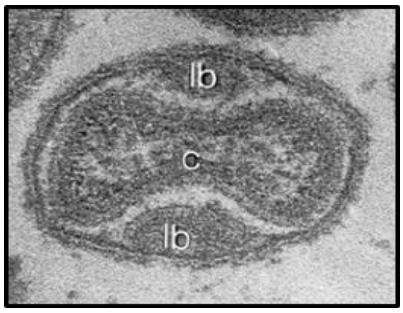
The Story of Smallpox Continued

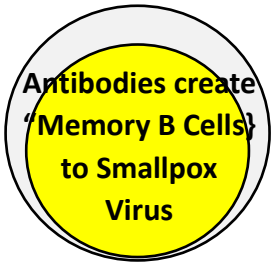
The reason a child does not need to get a smallpox vaccination before starting school today is because:

- **Dr. Edward Jenner noticed young women who milked cows got sores on their hands, but rarely did they get smallpox.**
- **He thought maybe getting cowpox prevented getting smallpox.**
- **He knew that both viruses were similar in size and shape.**
- **He tested his idea by exposing a young boy to a small amount of the cowpox virus on purpose. Later, he exposed the boy to a time the smallpox germ & amazingly, he did not get smallpox.**



Cowpox Virus **Smallpox Virus**



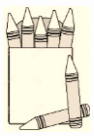


- **The boy's body created memory B cells (antibodies) to the cowpox virus.**
- **After a few weeks, Dr. Jenner put a small amount of smallpox virus in the boy's skin. His immune system thought it was the cowpox germ and quickly produced many antibodies and destroyed the smallpox virus.**
- **Dr. Jenner proved that memory B Cells (antibodies) can destroy an invasion of smallpox virus.**

Did You Know?

- **The smallpox vaccine was so effective, that in the early 1950s, smallpox was declared to be eradicated or eliminated from the world.**
- **In 1972, doctors stopped giving smallpox vaccination to children in the United States.**

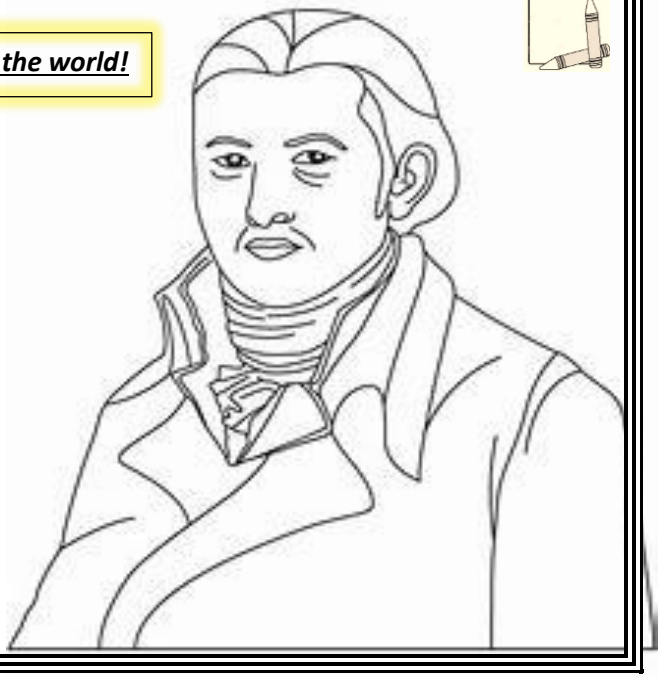
Since 1979, there have been no smallpox infections anywhere in the world!



Note: Edward Anthony Jenner was a scientist in England.

He discovered how to stop people from getting sick from smallpox. Smallpox caused sores and scabs, fever, and many people died. There was no cure for smallpox until he developed a smallpox vaccine.

Today, NO ONE gets sick with smallpox because his vaccine was given to people worldwide which eliminated smallpox entirely. That is called "Community Immunity".



getdrawings.com

The Story About Polio

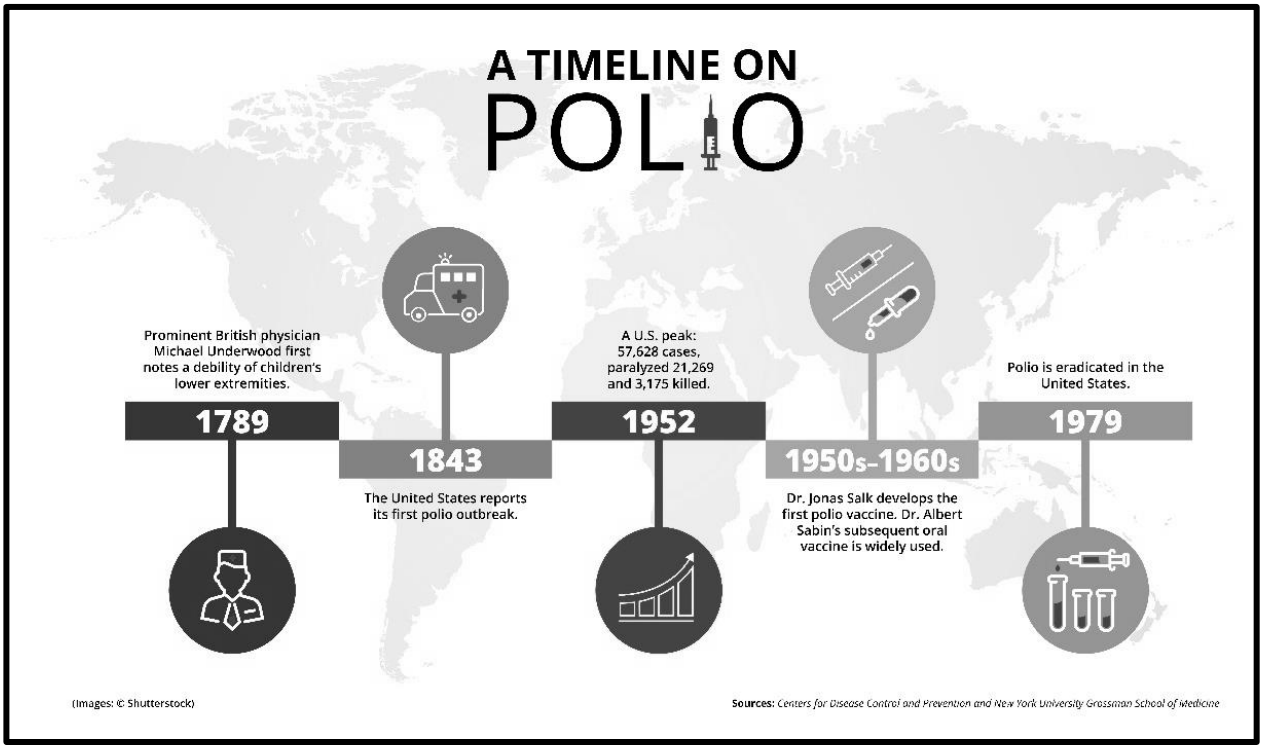
Did you know that polio or poliomyelitis is a life-threating disease caused by a virus? Yes, polio is a virus. Polio affected a person's spinal cord causing a person to not be able to move parts of their body. We call that paralysis. Many children were affected and could not breathe or walk on their own.

The polio virus:

- **Affected mostly children under 5.**
- **Is spread from person-to-person on contaminated surfaces.**
- **Lives in person's throat in droplets & spread by a sneeze/cough.**
- **Is in a person's feces for weeks & in contaminated food & water.**
- **Is spread before a person has symptoms to 2 weeks after illness began .**
- **Causes damage to the nervous system.**

There have been no cases of polio in the U.S. since 1979. It is estimated that 16 million people today are walking and not paralyzed because a vaccine was developed.

There are only three Counties in the world where there are polio cases. There has been no Polio in the U.S for 30 years however polio virus could be brought in o the country by

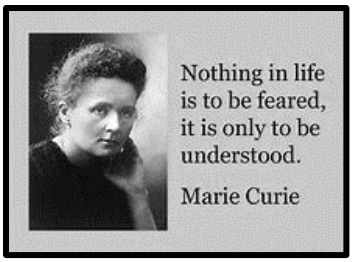


travelers infected with polio virus. The last time the polio virus was brought into the U.S. was in 1993. The goal is to continue giving vaccine so that just like smallpox there will be no cases of polio in the world.

https://www.cdc.gov/polio/what-is-polio/polio-us.html

Hazards: A Cause of Harm and Increased Fear

Fear increases a feeling of "not being in control".



How can a person deal with fear?

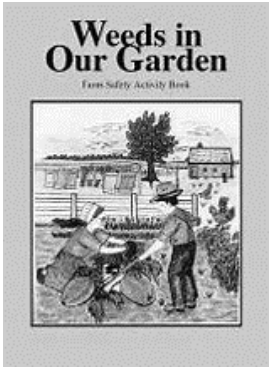
Marie Curie was the first woman to win a Nobel Prize in Physics and later along with her husband, discovered how to use X-rays to help doctors know what is happening inside so the best treatment can be provided for the person.

I like Marie Curie's quote about fear. Marie Curie said, *"Nothing in life is to be feared, it is only to be understood, now is the time to understand more, so that we may fear less."*

https://www.biography.com/scientist/marie-curie

Hopefully, this booklet about cold, flu, and the new COVID virus, will help to increase the reader's knowledge and foster understanding. When fear is decreased, preventive behaviors can be put into action to prevent illness. We know that someone higher than us, cares about what happens in our lives, but we need to do our part by promoting prevention actions & living a healthy lifestyle.

https://engineering.purdue.edu/~agsafety/IRSHC/Docs/ActivityBooks/WeedsInOurGarden.pdf



A good way to look at preventing injuries is found in an activity book by Purdue University called, "Weeds in Our Garden" written and created by the Indiana Rural Safety and Health Council.

The Council wrote that, "Unexpected injuries, (some say accidents) – are just like weeds in our garden."
They explain, that "Even though we do not plant weed-seeds in our garden, some will sprout anyway. If we do not pull the weeds out, they will weaken the good plants. Just like weeds, we should work at keeping our lives as free as possible from accidents and injuries."

Can we apply the same thinking (need to do our part) to prevent illness?

Farming continues to be a high-risk hazardous environment. Each year we do have injuries and farm-related deaths. Farm safety educators continue to provide awareness and knowledge so farm families can reduce farm hazards and prevent injuries and deaths. Farm hazards include physical, mechanical, chemical, biological (viruses, bacteria, fungus, and other living organisms), and/or mental stress factors.

What Can A Farm Family Do to Prevent/Reduce Injuries and Deaths?

Some farmers take time to walk around their farm & home as a family, to look for high-risk hazards.

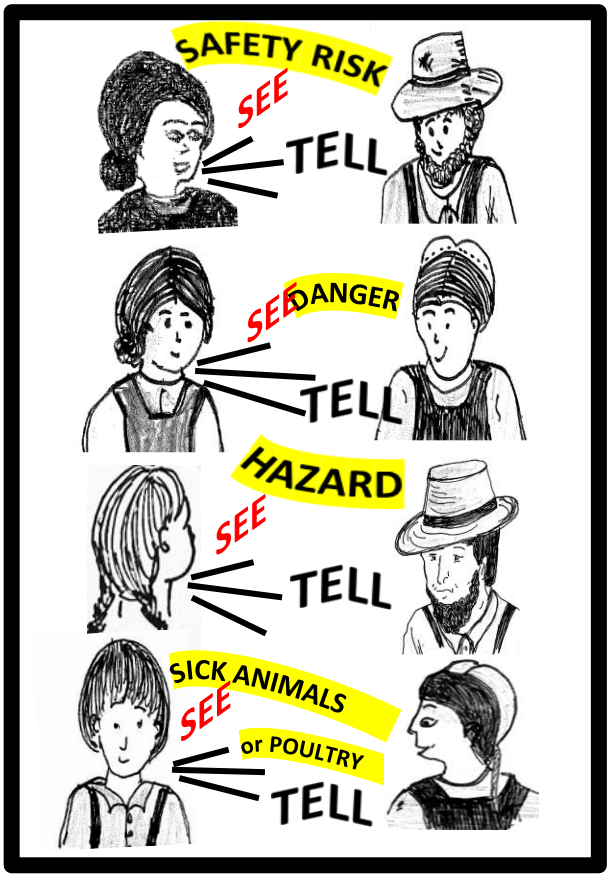
Hierarchy for Hazard Control: Farm Safety

Once a safety hazard is spotted, the risk of injury or death, can be decreased by eliminating, isolating, substituting, or placing a barrier to prevent access to the high-risk area or animal.

Farmers encourage everyone to keep safety a top priority. They take time to teach their children or workers safe work behaviors and to tell someone if they spot a potential hazard.

Adapted from Hierarchy of Hazard Controls by

Children often say, "That's a danger" or "Dad, that's not farm safe".

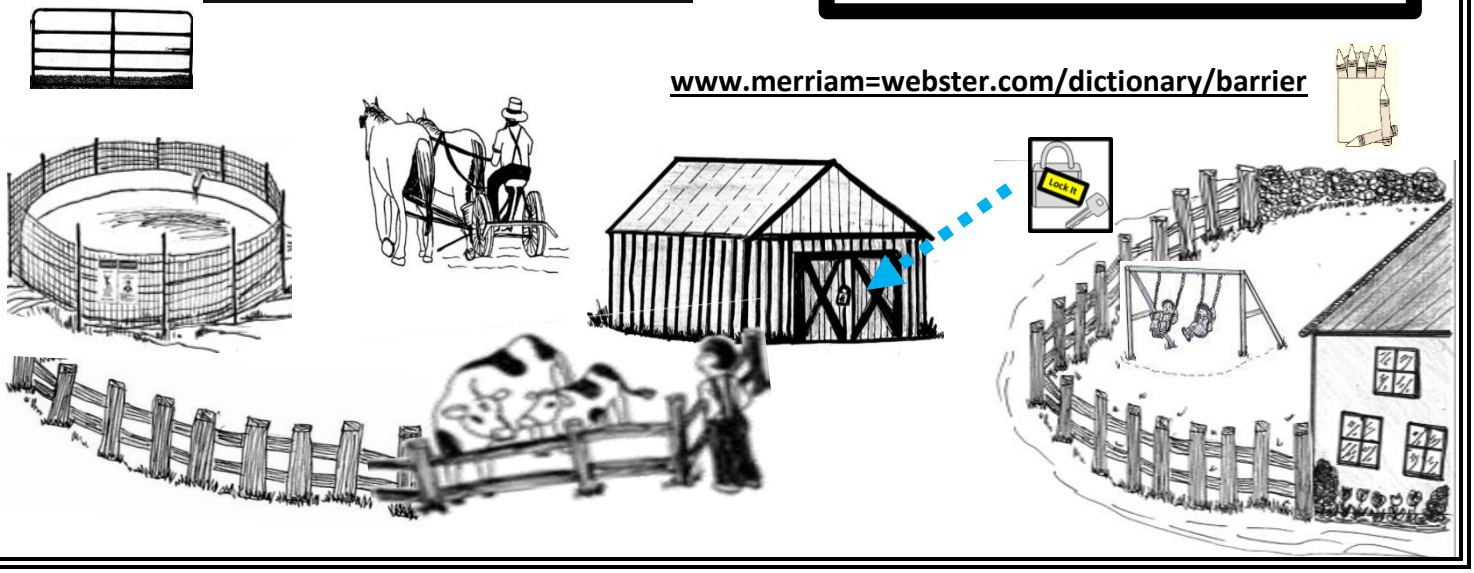


Farmers prevent access to ponds, manure pits, large animals, and farm equipment with a fence or structure---a barrier.

What is a barrier?

According to the Merriam-Webster dictionary, *a barrier is some sort of material that is used to block or prevent and/or hinder movement.*

www.merriam=webster.com/dictionary/barrier



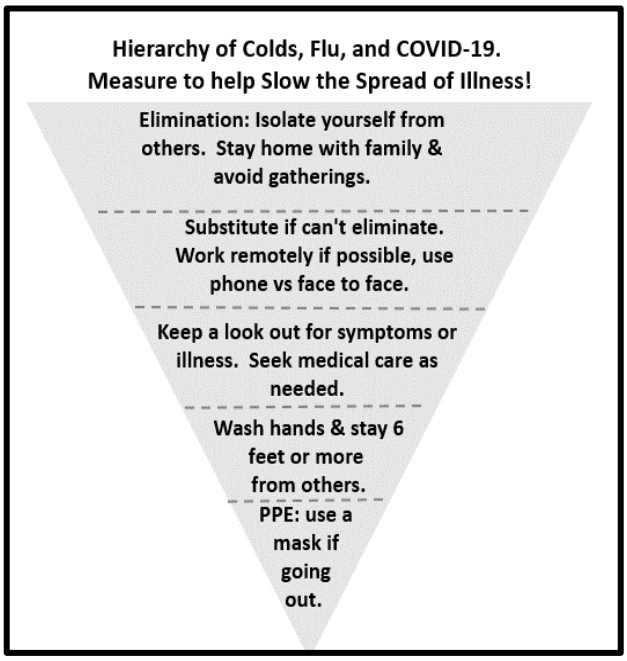
Hierarchy of Hazard Control: Respiratory Illnesses

Getting sick with a cold, the flu, or the new COVID-19 virus can be thought of as a hazard. Especially when you consider physical suffering, medical costs, loss of school or work time, and the loss of a loved one.

Is there a "Hierarchy for Respiratory Illnesses" to slow the spread of illness?

The following illustration is adapted from the Centers for Disease Control and Prevention's (CDC) website.

Note, the top measure is to isolate yourself from others by staying home with family and avoid gatherings.



https://www.cdc.gov/niosh/topics/hierarchy/default.html

Next, we substitute, if we cannot eliminate, by working from home. Farmers have it over most of us, they are already at home with just their family.

Increase hand washing, get medical care as needed, and when out in public: show respect and kindness by staying 6 feet from others and by wearing a mask.

A mask prevents you from taking in respiratory viruses that can cause illnesses. You might think, "A cotton mask will not help much to keep germs from getting into my lungs like an N95 mask. It's just several layers of cloth."

You are correct, a cotton mask does not filter out as may germs as would an N95 mask, but it does block bigger droplets and staying 6 feet from others decreases the risk of exposure.

The N95 masks continue to be needed by doctors and nurses who work many hours near patients who are very ill suffering with a flu or the COVID-19 virus.

Prevent Cold, Flu or COVID-19 Illnesses

Follow the *4 W's:* Wear A Barrier, Wash Often, Watch Distance, Wait If Sick!

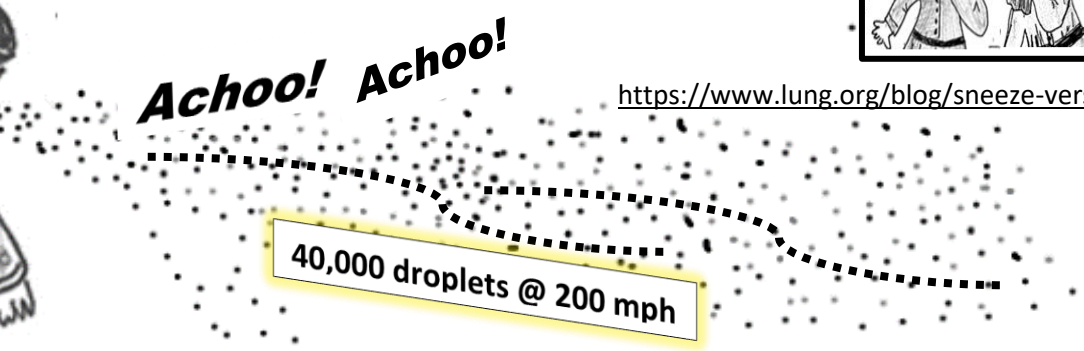
1 Wear-A Barrier.

Did you know that both a cough and a sneeze have one thing in mind----to get rid of whatever is ticking or irritating the inside of your nose, throat, or lungs?

A cough or sneeze results in a sprinkling of saliva, mucus, irritants (pollen), or viruses. Viruses can live on surfaces for hours.

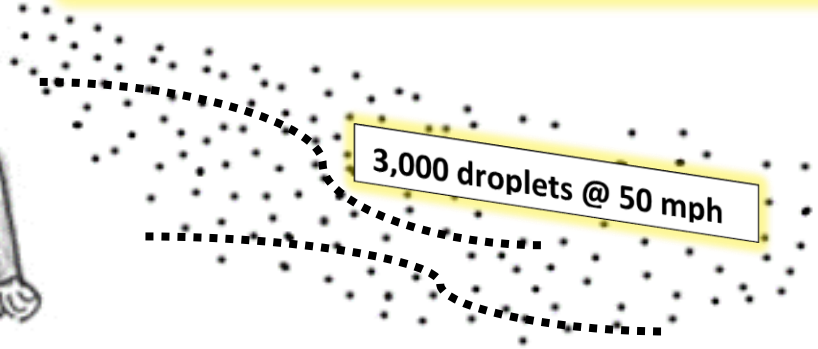
Mother says, "Cover a cough with your hand, arm, or use a tissue, don't spread your germs into the air."

https://www.lung.org/blog/sneeze-versus-cough



Did You Know That:
A sneeze can expel up to 40,000 droplets of saliva and can travel up to 200 mph.

When we cough or sneeze, large drops of liquid containing the virus escapes into the air. The droplets are somewhat sticky & fall about 6 feet to the ground. These tiny fragments will float in the air for hours.



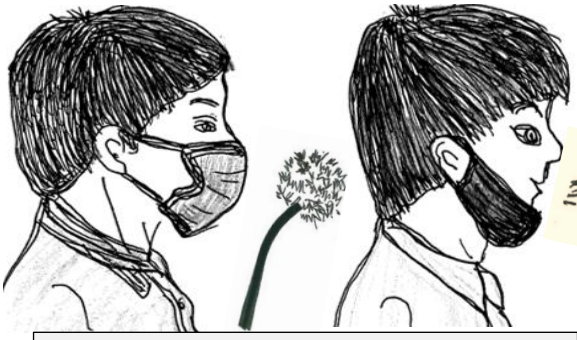
Did You Know That:
A cough can expel up to 3,000 droplets of saliva and can travel up to 50 mph.

Wear a Barrier Continued

A good protective barrier (as per experts) is one that:

- Covers both nose and mouth.
- Fits close to sides of face.
- Is made of 2 or more layers of material.
- Sunlight does not shine through when it is held up to a window.
- Children under 2 years of age should not wear a mask.

CDC.gov



With a mask on, the boy could not blow the dandelion seeds into the air.

- If a barrier slips below your nose or hangs around your chin, the barrier does not prevent germs from getting into your nose/mouth or from reaching others. when you sneeze, cough, or speak.

With a mask on, the boy could not blow out the candle flame.

- Masks with exhalation valves should NOT be worn (a virus) can enter & exit through the valve.

No protection

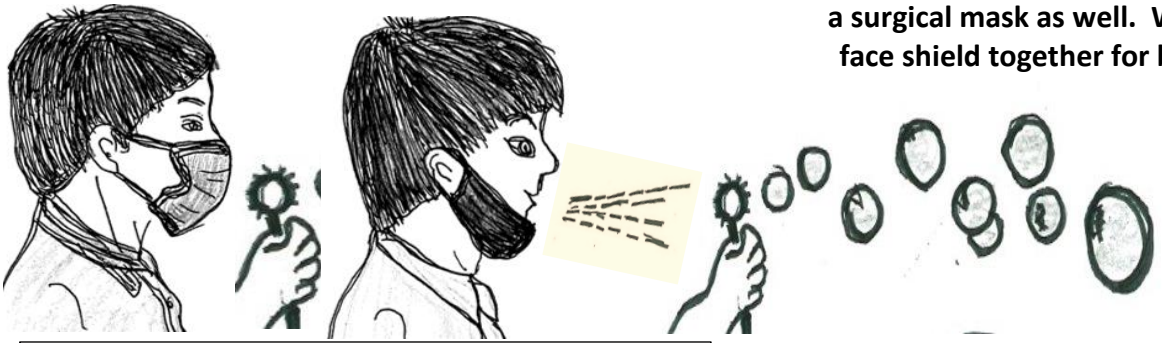
Better protection

- A face shield protects the eyes of the person wearing the shield, but the virus can enter and exit (top/bottom) easily.

With a mask on, the boy could not blow out the match.

Best protection is both mask & Shield

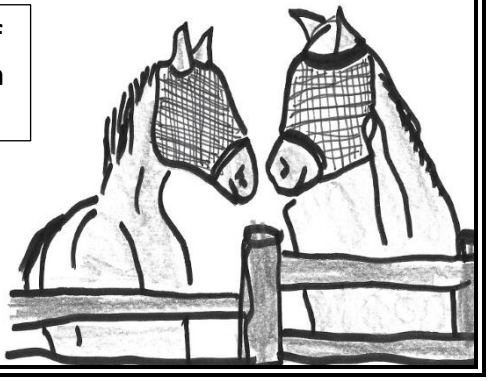
- Dentists, doctors, and nurses who are in close contact with patients, wear a face shield and a surgical mask as well. Wear a mask and face shield together for best protection.



With a mask on, the boy could not blow bubbles.

Protect Your Health Match Game

Write the correct letter from the middle box that matches the pictured Barrier.



A. A barrier to keep files out of a horse's eyes.

B. A barrier to prevent burns to eyes when welding.

C. A barrier to prevent grain dust from getting into lungs.

D. A barrier that protects eyes when sanding or scraping.

E. A barrier to prevent breathing in pesticides or chemical fumes.

F. This barrier prevents chemicals or pesticides from splashing onto clothing.

G. This barrier prevents a pet from licking a sore or cut.

H. A barrier that prevents chemicals from getting on hands and skin.

I. A barrier to keep gems from getting in or out of your nose & mouth.

J. A barrier that protects clothing of a famer when spraying pesticides on crops in fields.

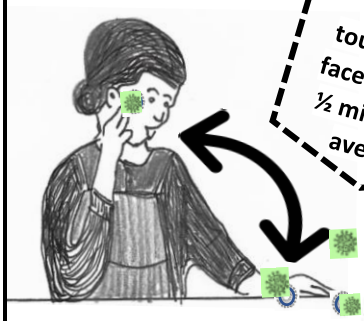
When You Go Out in Public (Store, Doctor, Hospital, Library) Wear a Barrier

Wearing a Barrier:

- **Prevents accidentally passing the virus to others** (you may have been exposed and are able to spread the virus but have no signs or symptoms). ***Your mask lessens the amount of virus that is sent into the air to infect others.***

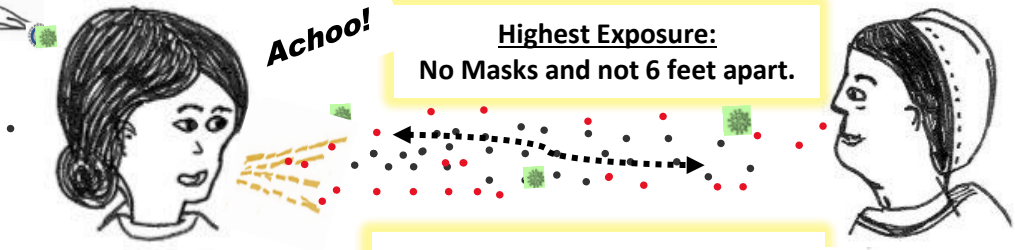
Wearing a Barrier:

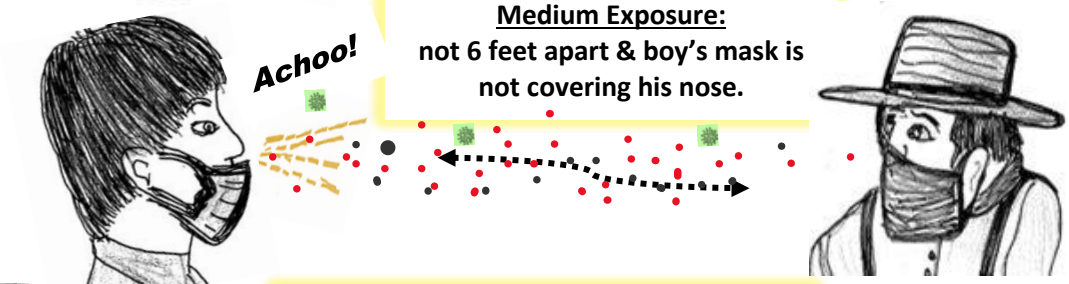
- **Protects you,** when people near you **do not** maintain 6 feet distance, especially in a confined space like a store. If a sick person talks, coughs or sneezes near you, your mask will lessen the amount of virus you are exposed to.

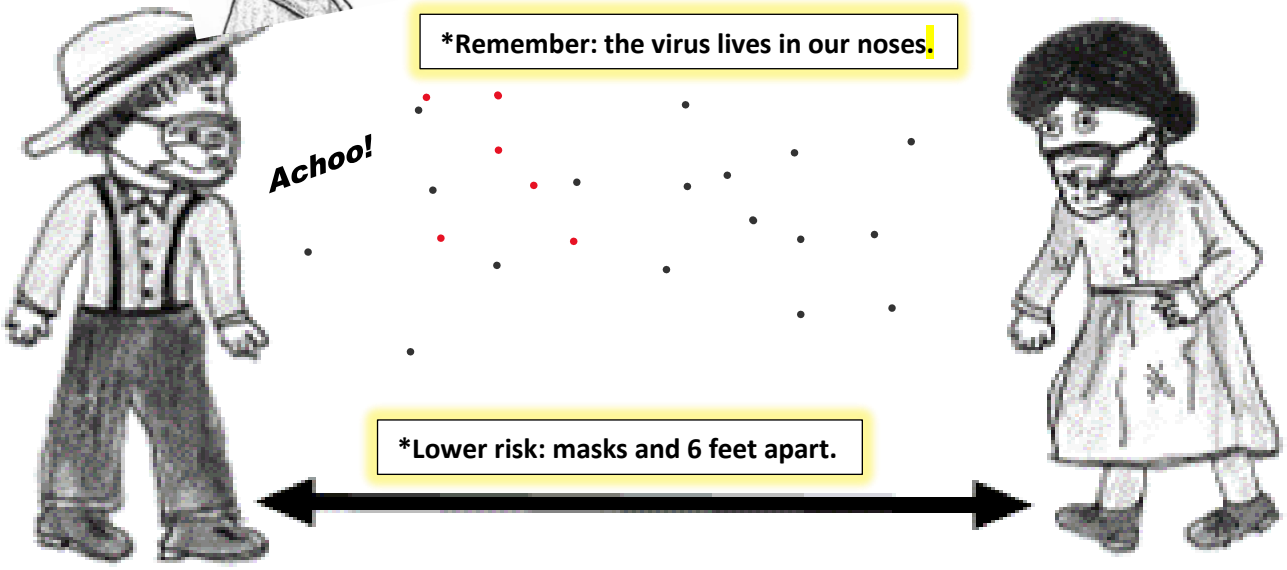


Wearing a Barrier:

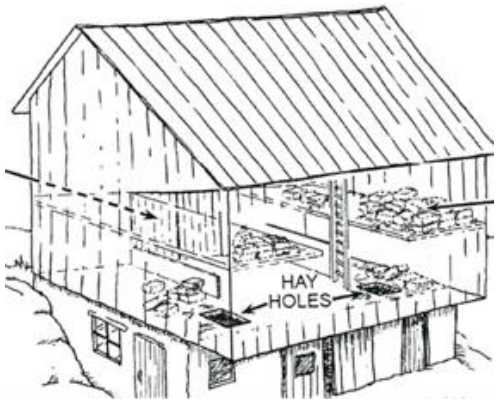
- **Prevents the person from touching their face** with their hands. The virus can live on a doorknob, table, chairs, or other items in our home/school for up to 3 days. Our fingers touch a contaminated surface and transfer the germs to our face.







Wear a Barrier Continues



The amount of aerosolized virus will be less in:

- ***A large well-ventilated space like a barn.***
- ***Practically absent outdoors.***

<u>We are at a high risk of exposure to respiratory viruses:</u>

- **If we are Indoors where windows and doors are not open (<u>little ventilation).</u>**
- **If we are out in public and someone near-by is not wearing a barrier.**
- **<u>When it is difficult to keep 6 feet from others in public places.</u>**
- **When you work for long periods of time serving customers (some for 8 hours or more) in an environment with little ventilation.**

- **Show respect to clerks and other customers by wearing a barrier for 15-30 minutes when out in public.**

Kindness: Search-A-Word

When out in public wear a barrier to show:

- **Respect of others.**
- **Kindness and caring.**
- **Community support.**

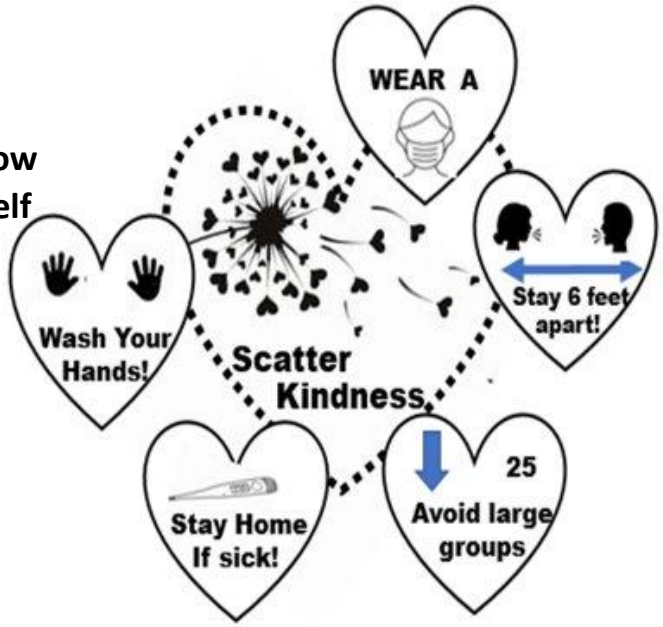
KIND
CARE
FRIEND
RESPECT
SMILE
LISTEN
HELP
LOVE

C	S	O	R	E	S	P	E	C	T
A	P	J	S	K	A	U	I	G	I
R	D	I	L	T	L	Q	F	L	N
E	T	H	M	G	I	A	R	V	V
N	W	D	D	S	S	N	I	K	S
G	P	L	N	B	T	R	E	Z	M
P	N	O	T	V	E	N	N	T	I
R	T	V	Y	P	N	D	D	S	L
O	H	E	L	P	K	V	W	L	E

https://upub.net/blog/info/kindness-activities-free-printables/

Kindness is:

- **Caring about others**
- **Letting others go first**
- **Giving a smile to those you do not know**
- **Doing for others and forgetting yourself**
- **Taking time to listen to someone**
- **Giving others your time and talent**
- **A choice that makes you feel good**
- **Wearing a barrier when out in public**
- **Infectious: pass it on to everyone**



Wear a Barrier continued

Dr. Fauci, the director of the National Institute of Allergy and Infectious Diseases, reports that "One of the reasons why ***it's so important to wear a face covering*** is that we know now that about 40 to 45% of the people who are infected don't have any symptoms."

"Talking, singing can spread virus and people don't fully understand that simply breathing and speaking can send infectious virus particles airborne. People have an understandable, but incorrect interpretation that the only time you transmit infection is when you're coughing and sneezing all over someone," he said.

"What they don't appreciate is that if you are speaking, even if you don't speak loudly, and if you are singing, which is even worse than just speaking, you have these particles that come ut that can stay in the air for a period of time. Some of them drop to the ground, which is the reason why we say keep six feet of distance. But some of them are aerosolized and can hang around the air," added Fauci.

"For that reason, it's so important to wear face coverings, particularly when you think you're in a situation where nobody's sneezing or coughing—doesn't matter."

https://www.msn.com/en-us/news/technology/dr-fauci-just-gave-the-best-reason-to-wear-a-face-mask/ar-BB1am3wo?ocid=msedgntp https://www.msn.com/en-us/health/medical/dr-fauci-says-this-is-one-way-you-dont-realize-you-can-get-covid/ss-BB1akBKC

Sneeze into Your Mask

What Should I Do If I Need to Sneeze When Wearing A Mask?

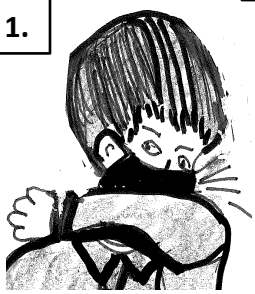
That is a good question, sneezes come quickly.

Do Not Take Your Mask Off and Sneeze Into the Air.

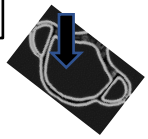
Prevent Spreading Germs By:

1. Cough or sneeze into your mask (in your elbow) or cover your mask with your hands.
2. Take off mask---Throw out disposable masks.
3. Cotton mask can be washed later & hung in the sunshine to dry.
4. Wash hands, face, & arms with soap/water (20 seconds) or use a sanitizer.
5. Put on a new clean face mask.

1.

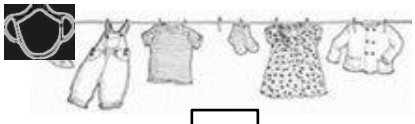


2.



Trash disposable mask

Wash & Hang cloth mask in the sun



3.

4.

5.

Put on clean Mask

Game: Who Does Not Have a Mask Over Their Nose and Mouth

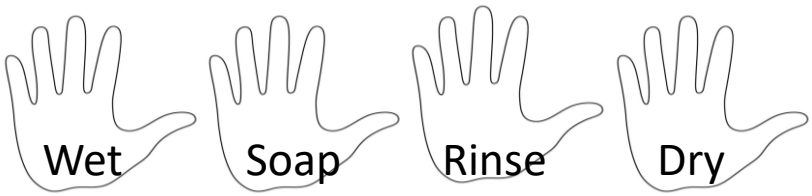
Can you find3? Then color in each person's mask.

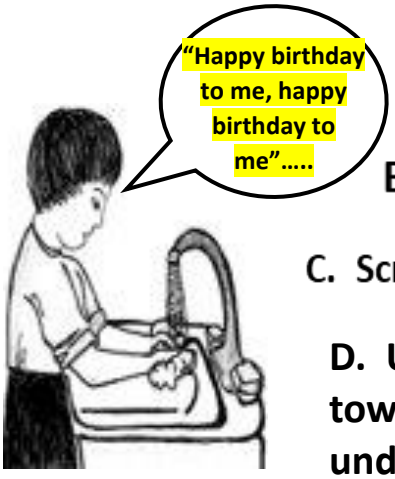
Color in each mask.

Prevent Cold, Flu or COVID-19 Illnesses

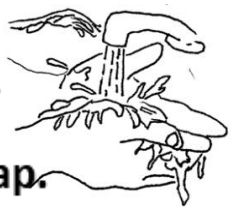
Follow the *4 W's:* Wear A Mask, Wash Often, Watch Distance, Wait If Sick!

2 Wash-





A. Wet your hands under water.

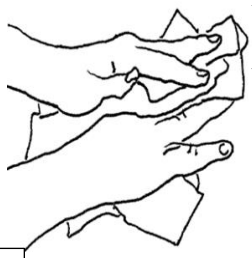


B. Now use bar soap or liquid soap.

C. Scrub for 20 seconds. Sing "Happy Birthday" 2 times.

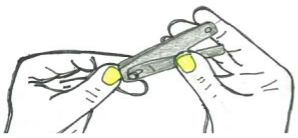
D. Use a nail brush, a wet washcloth, or a wet paper towel to get the many germs that love to hide under fingernails.

E. Rinse under water and then dry your hands.



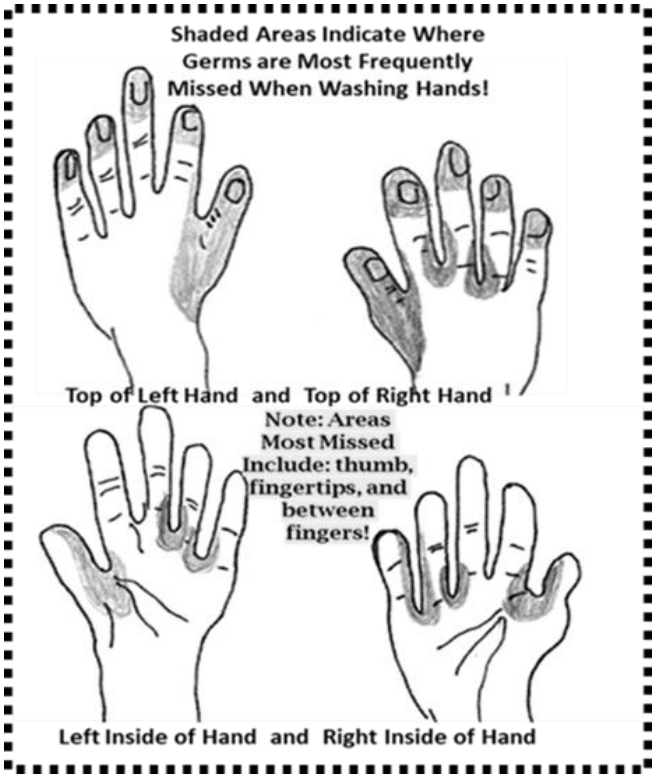
Damp hands transfer germs 1000 X 's faster.

Keep Nails Short!



Make Hand Washing Your Habit!

Did You Know That Most People Miss the Germs Hiding Under Fingernails, Fingertips and/or Between Their Fingers?



Wash-Often Continued

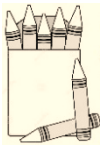
Wash your hands with soap and water for at least 20 seconds jf available or use a hand sanitizer that contains 60% or more alcohol. Rub the sanitizer until hands are dry ----rubbing helps to break down the fat layer around the virus.

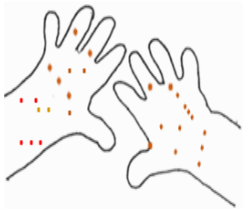
Wash your hands before making or preparing food and before you eat.

Soap dissolves the fat layer.

Soap is a wetting agent.
Soap lowers the surface tension and triggers the virus wall to split open causing the virus to disintegrate.

Send Germs down the drain!





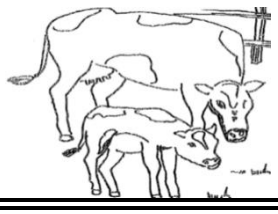
After coming:

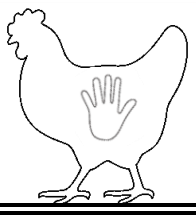
1. In from the barn.

2. Coming home from work or school.

3. Playing or working in garden.

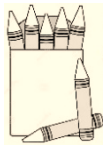
4. Working or caring for animals.



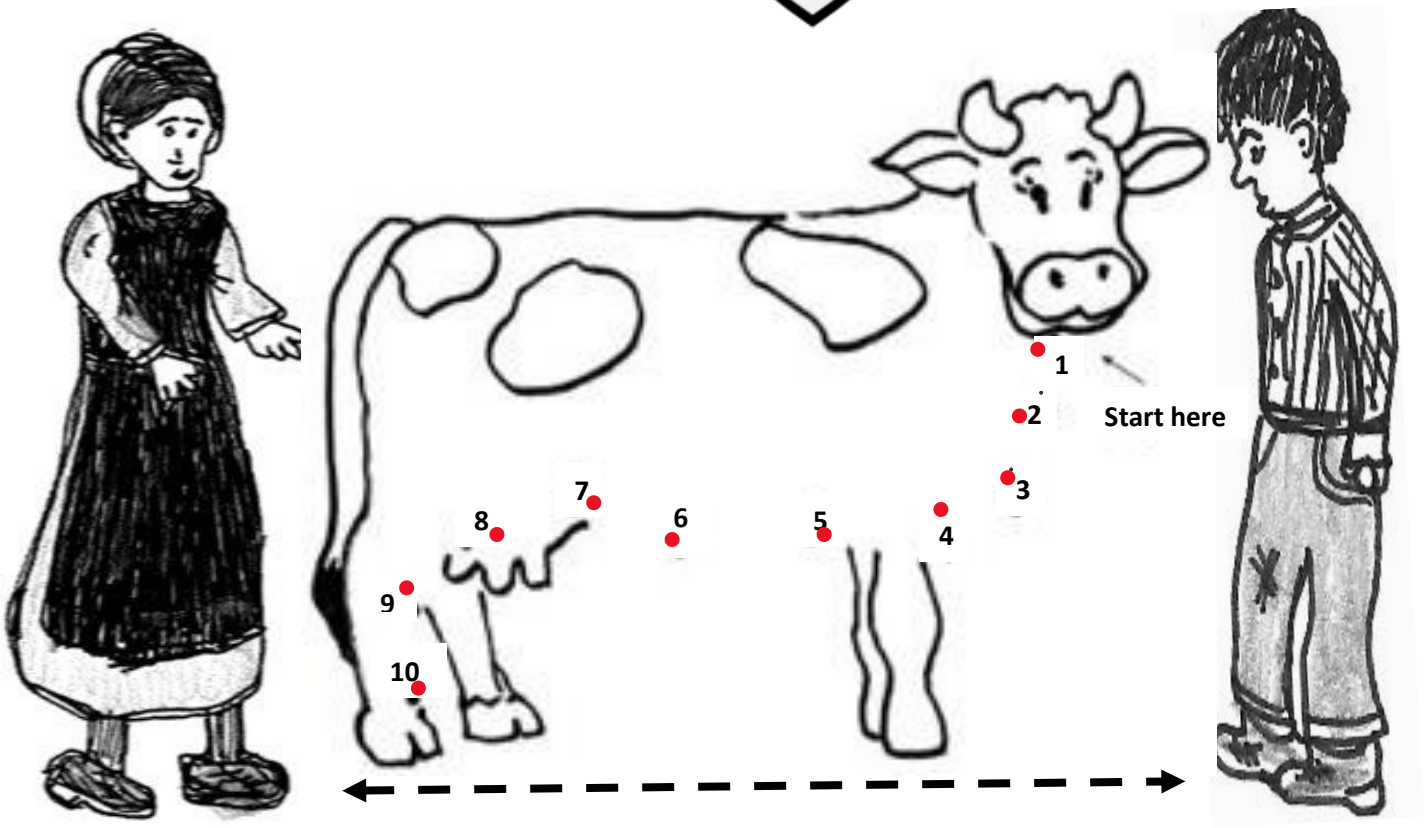


Follow the *4 W's:* Wear A Mask, Wash Often, Watch Distance, Wait If Sick!

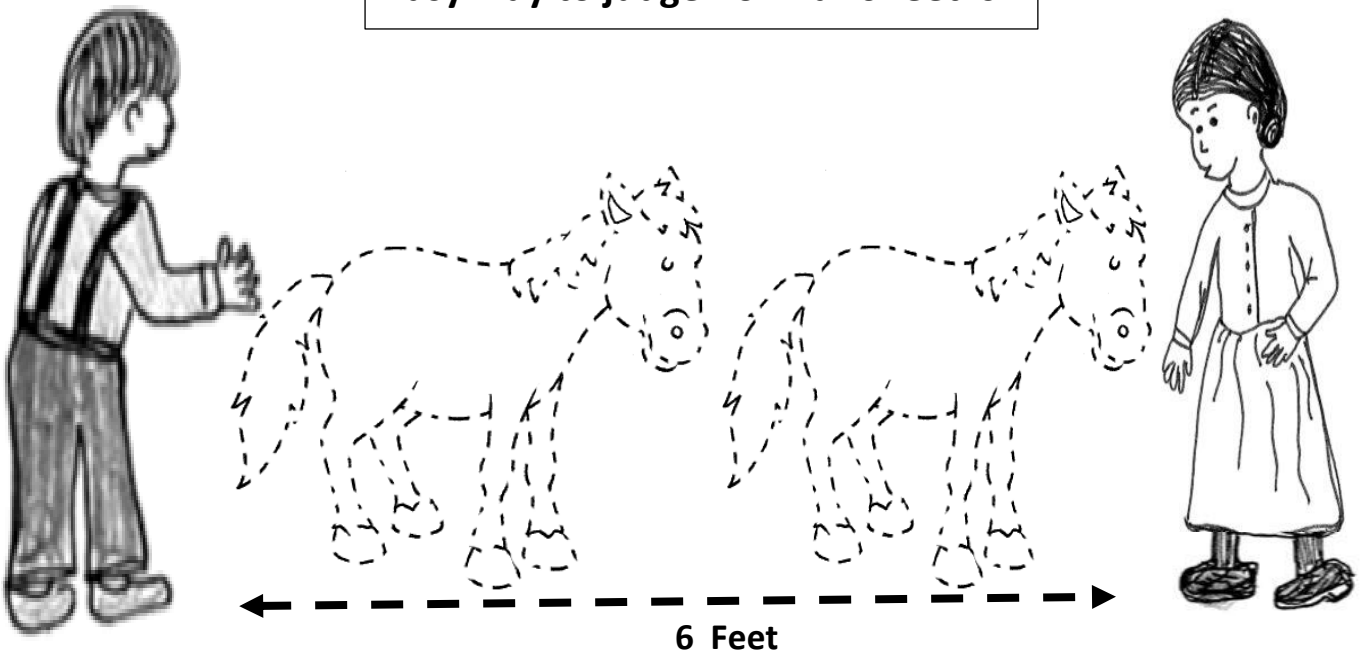
3 Watch-



Do the DOT-T0-DOT

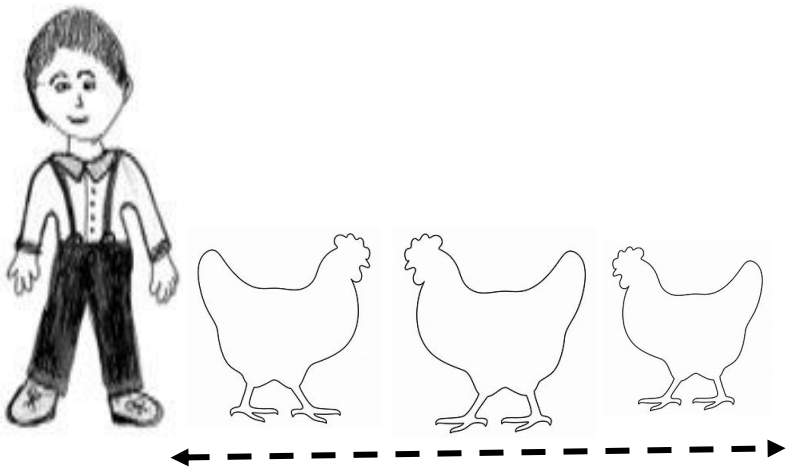


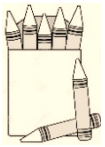
Easy way to judge how far 6 feet is.



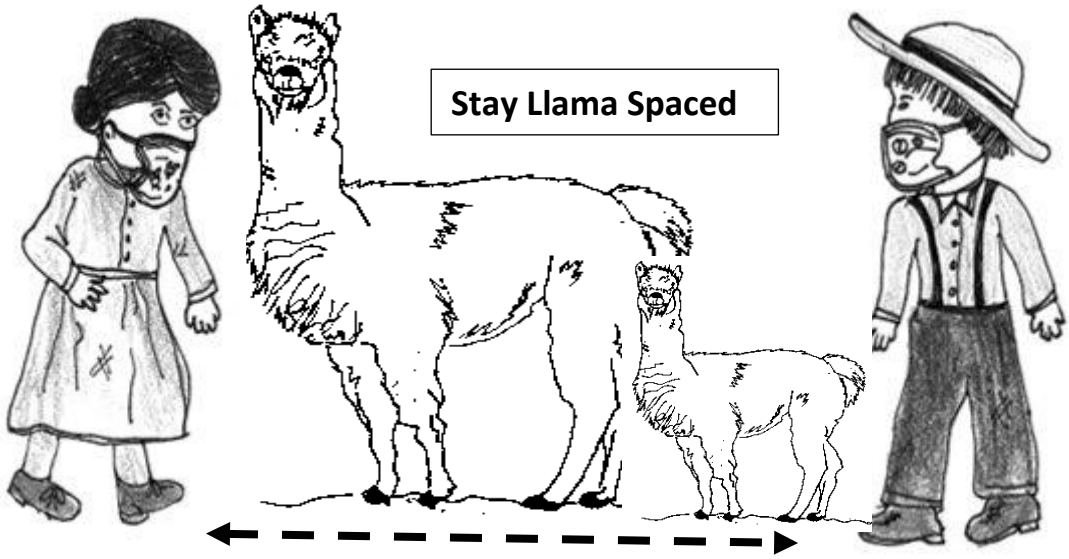
6 Feet

Watch Distance Continued





Stay Llama Spaced



https://www.miamiherald.com/news/coronavirus/article242846836.html

In public, keeping an empty chair between each person, prevents the spread of germs.
Draw a barrier (mask) on each child to prevent germs from getting into the air when they talk, cough, or sneeze.

Prevent Cold, Flu or COVID-19 Illnesses

Follow the *4 W's:* Wear A Mask, Wash Often, Watch Distance, Wait If Sick!

4 Wait-

Waiting at Home
Until You feel well
is showing
KINDNESS!

Stay home from school or work if you are sick.

Slow the spread of illness to family members.
Rest in a quiet room away from others!

A newborn baby, young children, those with a low immunity, and older adults are more at risk of having complications if they get ill.

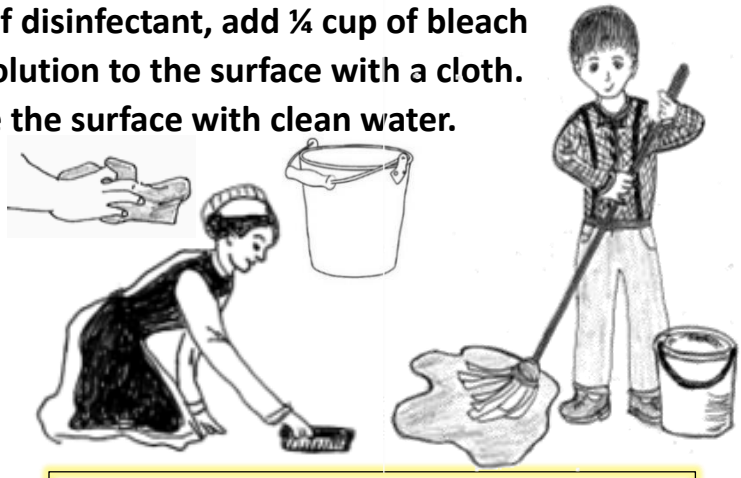
***Flu and cold virus* can be spread by the infected person 1 or 2 days before symptoms appear.**
***The COVID-19 virus* is spread at the beginning and even before the person knows they are sick. Some do not show symptoms (estimated that about 40%+) but they can spread the virus to others.**

Cover a cough or sneeze. Put all used tissues in a plastic shopping bag or waste can.
Wash hands after coughing/sneezing with soap/water or use a hand sanitizer.

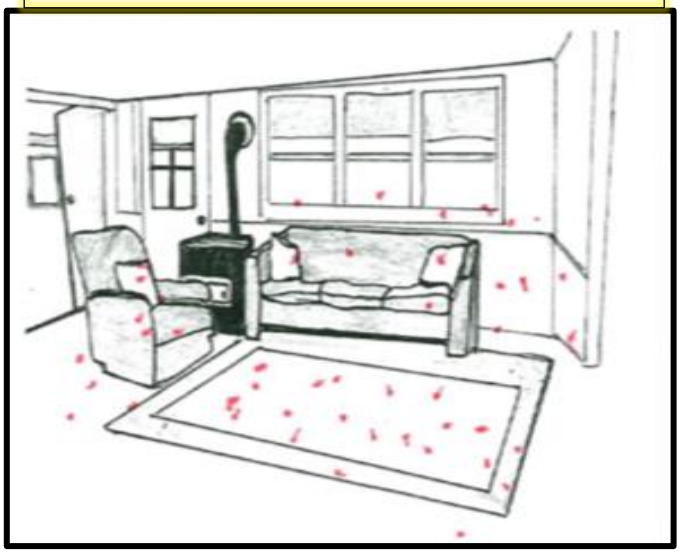
https://www.cdc.gov/flu/about/disease/spread.htm www.cdc.gov/.../common-illnesses/colds.html
https://www.cdc.gov/flu/school/

Clean and disinfect hot spots: tables, chairs, floors, windowsills etc.

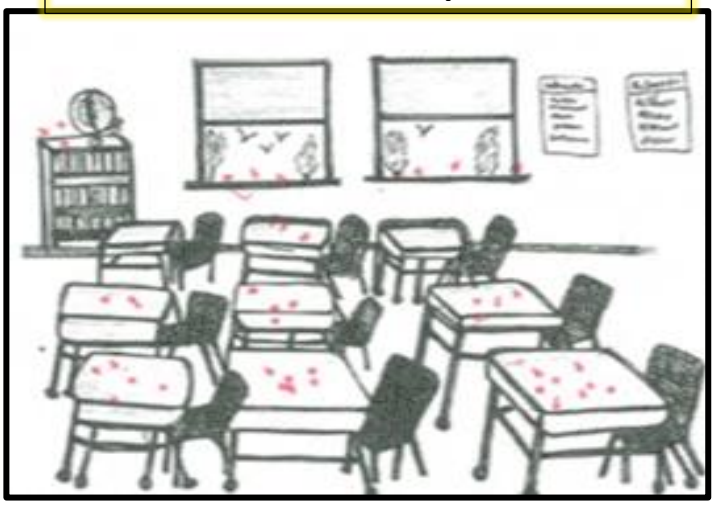
If an EPA-registered disinfectant is not available, use a fresh chlorine bleach solution. To make and use the solution: • Add 1 tablespoon of bleach to 1 quart (4 cups) of water. For a larger supply of disinfectant, add ¼ cup of bleach to 1 gallon (16 cups) of water. • Apply the solution to the surface with a cloth. • Let it stand for 3 to 5 minutes. • Rinse the surface with clean water.



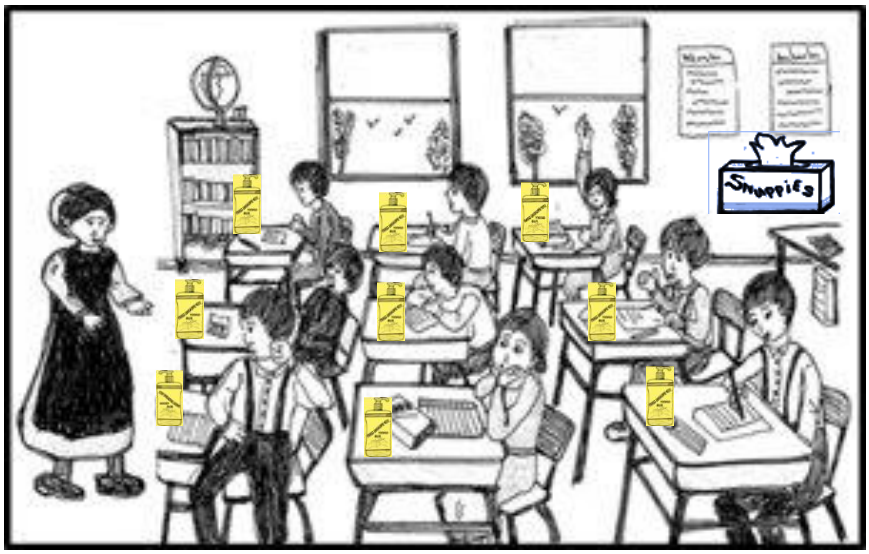
Clean and disinfect hot spots at home.



Clean and disinfect hot spots at school.



Prevent Illness in School



Cover a cough or sneeze.

Then wash with soap & water or use a sanitizer.

Stay home if ill.

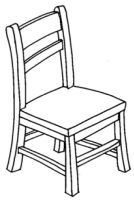
Wait If Sick Continued

When shopping:

It is easy to get germs on your hands from something that someone else touched or handled. When there is no soap and water, use a sanitizer to destroy germs before they can get into your mouth or nose.

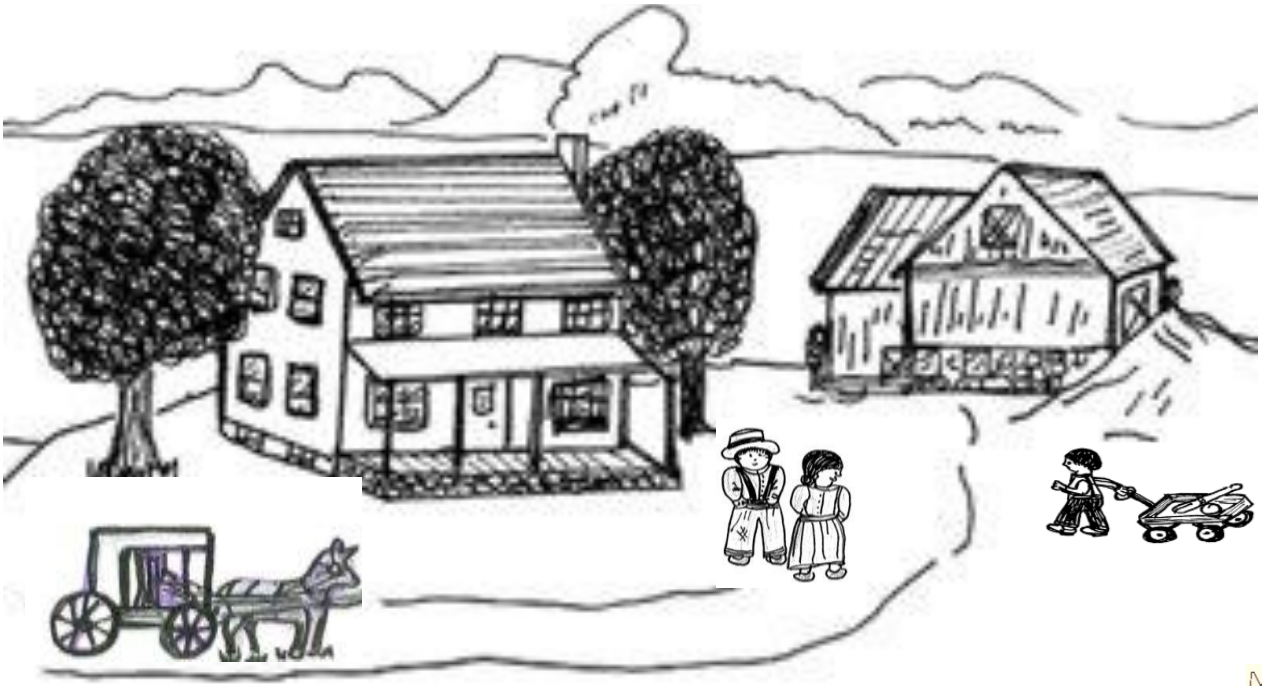
Remember:

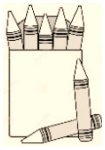
- **Carry sanitizer wipes or gel in your buggy, car, purse or in your backpack.**
- **After you are finished shopping, everyone can use the hand sanitizer, to destroy any germs they may have gotten on their hands.**



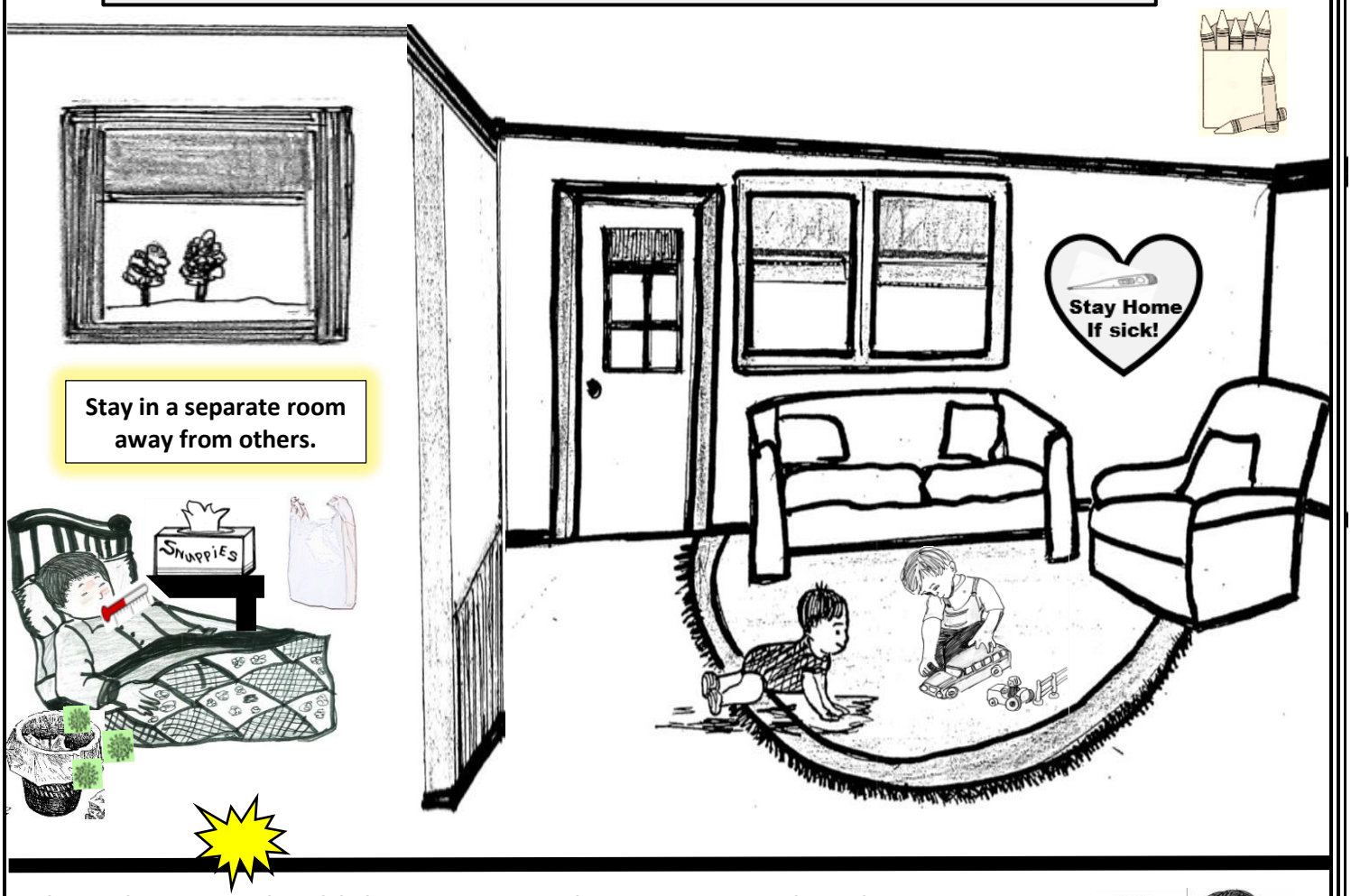
Thinking about going to visit someone:

- **DO NOT go visit when you know someone in their family is sick—call ahead and check.**
- **<u>DO NOT visit if you or someone in your family is ill.</u> Staying away till everyone is healthy, is just being kind and thoughtful.**





Prevent Others from Getting Ill When One Person is Sick



The sick person should decrease spreading germs to others by:

- Covering their mouth and nose with a tissue when they cough or sneeze.
- Throwing away used tissues in a lined trash can.
- Washing their hands with soap/water or use alcohol-based sanitizer.
- Wearing a mask when they are around others, at home, in a car, and at the doctors.

If you or a family member feels sick and may have COVID:

- Call your doctor & get medical advice---some patients are given medication to decrease symptoms early in the illness.
- Get plenty of rest, fluids, over-the-counter medication for fever or aches as your doctor recommends.
- Separate yourself from other people—stay in a specific room away from others. Do not have visitors.
- Stay home unless you go for medical care--do not visit public stores etc.
- If possible, use a separate bathroom or have someone disinfect a bathroom used by others.
- Family members should stay home for 10 days to prevent spreading the virus.

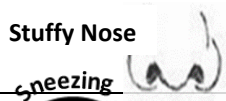
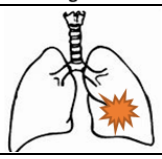
The person who cares for someone sick with flu or COVID virus should:

- Wear a mask when caring for a sick person.
- Make sure the sick person puts on a mask when you enter their room to give care.
- Wear gloves when you contact sick person's blood, stool, or body fluids, such as saliva, mucus, vomit, and urine. Throw out gloves into a lined trash can and then wash your hands.

https://www.cdc.gov/coronavirus/2019-ncov/index.html

Reference Information

Symptoms of COLD --- Flu --- COVID-19 Illness

Symptoms	***Symptoms***	***Cold***	***Flu***	***COVID-19*** *Can be milk to severe*
	**Fever**	**Rare**	**High 100-102F, can last 3-4 days**	**Common**
	**Headache**	**Rare**	**Intense**	**Can Be Present**
	**Body Aches & Pains**	**Slight**	**Usual, often severe**	**Can Be Present**
	**Fatigue Weakness**	**Mild**	**Intense, can last up to 2-3 weeks**	**Can Be Present**
	**Extreme Exhaustion**	**NEVER**	**Usual (starts early)**	**Can Be Present**
	**Stuffy Nose**	**Common**	**Sometimes**	**Has been reported**
	**Sneezing**	**Usual**	**Sometimes**	**Has been reported**
	**Sore Throat**	**Common**	**Common**	**Has been reported**
	**Cough**	**Mild to Moderate**	**Common can become severe**	**Common**
	**Shortness of Breath**	**Rare**	**Rare**	**In more serious infections**

Adapted from chart on https://www.webmd.com/lung/covid-19-symptoms

Can be copied and hung up inside a kitchen cabinet for future reference

Words: What Does That Mean?

Reference Information

- **Aerosolize Virus-** to be dispensed as an aerosol/tiny particle of virus that floats in air currents.
- **Antibodies**-Special cells that recognize an organism (germ) that invades the body. Antibodies can seek out and destroy the foreign invader.
- **Asian Flu**- influenza occurred worldwide as an epidemic. Caused by a virus (A2) strain.
- **Asymptomatic-** When a person is ill with a disease but does not have symptoms.
- **Bacteria**-A very large group of microorganisms or living organism that cause respiratory illnesses.
- **Coronavirus**- A group of viruses that cause respiratory and gastroenteritis illnesses.
- **Contagious**-Capable of being transferred from one person to another.
- **Disinfectant**—Substance that can destroy infective organisms & preventing their growth.
- **Droplets**—A small drop (particle of moisture or liquid) from the mouth when talking, sneezing, coughing, or singing. Droplet can transmit viruses to others while floating in the air.
- **Germs**-- a microorganism (bacteria or virus or microbe) that causes illness.
- **Hong Kong Flu**-An avian flu or H5N1 virus (caused an epidemic) in poultry that spread to humans.
- **Infectious-**A disease causing organism that can be transmitted to people, animals, & environment.
- **Immune System**- the bodies system d (white blood cells, memory cells etc.) that protects us from foreign material (bacteria/virus) by producing a response to fight and destroy the germ. .
- **Memory B Cells** –Cells that recognizes a previous foreign invader (germ) and alerts our immune system to quickly form antibodies and destroy the germ before it causes illness.
- **Novel Virus**-- A virus that has never been seen or caused illness before. "Novel"-new.
- **Pandemic**- A widespread, worldwide epidemic of a disease.
- **Plasma Cells**- A type of white blood cell that fights infections.
- **Respiratory Illness**--A disease affecting the respirator system.
- **Rhinovirus**- Any of several stains of virus that cause respiratory tract infection (flu, Cold).
- **Seizures**- A sudden attacks of motor, physical, or mental dysfunction with or without convulsive seizures or loss of consciousnesses.
- **Spanish Flu**- The 1918 flu pandemic which was deadly and involved H1N1 influenza.
- **Surgical Mask**-worn by health persons providing medical care to prevent breathing in or spreading germs that are found in tiny droplets when talking, coughing, or sneezing,
- **Virus**--An infectious organism that is not able to duplicate without assistance of a living host cell.
- **White Blood Cells**-A group of cells (in our bloodstream) that fights invading germs.

https://www.merriam-webster.com/dictionary/immune%20system

Reference Information

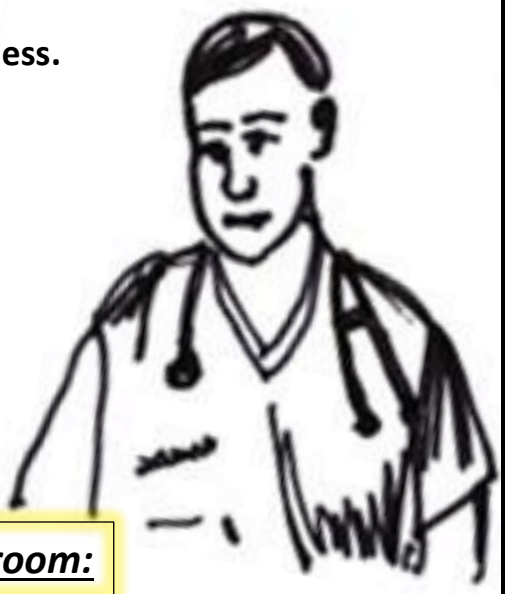
When To Call the Doctor

Fever is one of the ways the body fights germs. Germs (bacteria and viruses) are sensitive to heat and can't survive. Some fever is good, but when fever gets too high, a child/adult may seizure. When should a parent call a doctor for advice if a child has fever?

It's best to call a doctor when a child:

- Has a high fever that will not come down.
- Has seizures.
- Is not drinking, breastfeeding as usual.
- Is not wetting as many diapers or is going to bathroom less.
- Has vomiting or diarrhea that will not stop.
- Has blood or mucus in the stool, urine, or vomit.
- Has increasing belly pain that cannot be relieved.
- Is less responsive, seems inactive or very tired.
- Has difficulty breathing---noisy and/or fast.
- "Does not look right" to you.

Normal body temperature is 98.6 degrees. Fever is generally defined as greater than 100.4 degrees F.



What to tell a doctor at a visit or in an emergency room:

Tell:
What
When
How
Why

- The symptoms you noticed & when the symptoms started.
- Key medical history---allergies to food, medication, chronic conditions.
- Key changes in feeding, bowel movement, or in urination.
- History of fever---when fever started, how much, how many days.
- Any home remedies/medications the child or person is taking.
- Possible exposures ---exposure to ticks, someone ill, someone ill with measles, mumps, chickenpox, flu or COVID.
- Family members or visitors that are sick.
- Recent travels.

https://www.mayoclinic.org/healthy-lifestyle/infant-and-toddler-health/in-depth/healthy-baby/art-20047793

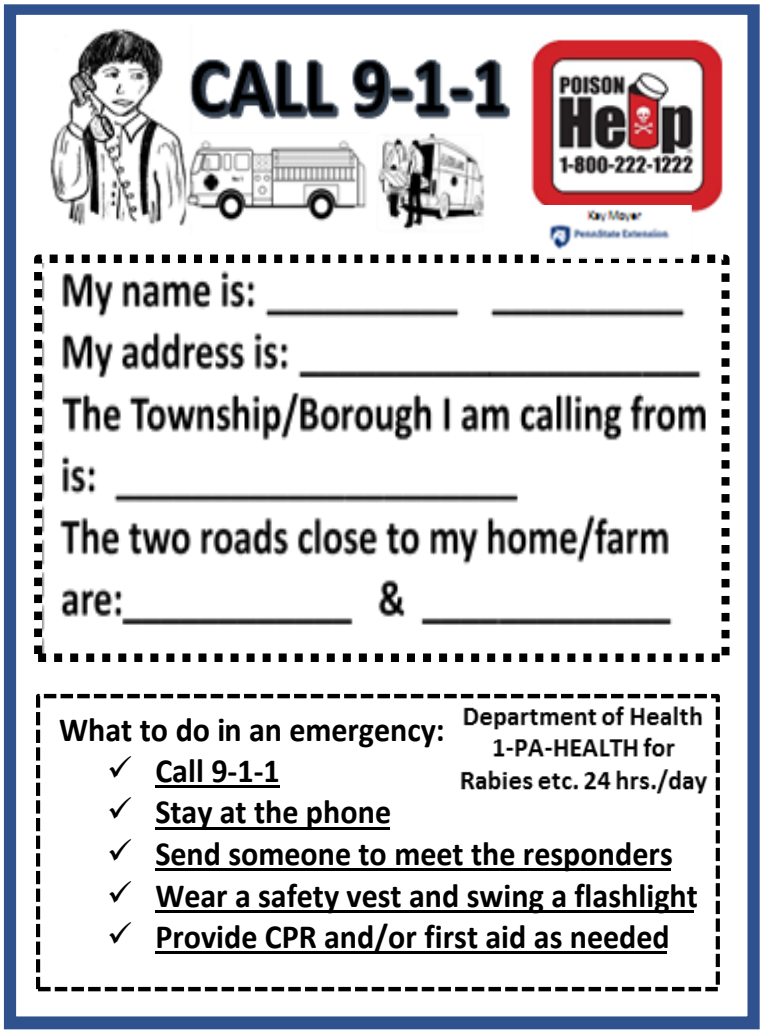
What to Do when A Person is Injured or Severely Sick

Reference Information

Seek Emergency Care or Call 9-1-1 when there is:

- **Bleeding that cannot be stopped.**
- **Unconsciousness or cannot respond (cry or talk).**
- **Seizures lasting longer than 5 minutes.**
- **Increasing difficulty breathing/noisy breathing.**
- **A blue, purple, or gray coloring to skin or lips.**
- **Head injury—eyes not responding to light equally, vomiting, headache, or the soft spot is bulging.**
- **A possible poisoning—call Poison Help line or 9-1-1.**
- **A large cut that is deep.**
- **Neck stiffness with a rash and fever.**
- **A large burn area that involves the head, face, chest, abdomen, hands, or groin.**

You can copy & put at your phone.



POISON Help
1-800-222-1222

https://www.in.gov/fssa/files/SeekMedCare.pdf

Need More Information About Colds, Flu, or COVID-19 Illness, Testing, or Treatment? See The Many Sources Below:

Reference Information

- **cdc.gov. Respiratory illness and health information cold, flu, and COVID pandemic. CDC increases the health security of our nation. As the nation's health protection agency.**

- **NYCAMH--New York Center for Agricultural Medicine and Health call 800-343- 7527 www.nycamh.org . You can order personal protective equipment**

- **https://www.lancastergeneralhealth.org/COVID-formation or call 717-544-5941 for testing times and information or call 888-544-3646.**

- **Coronavirus in Pennsylvania – Department of Health**
  1-877-PA-HEALTH or 1-877-724-3258
  https://www.health.pa.gov/topics/disease/coronavirus/Pages/Cases.aspx

- **Penn State Milton S. Hershey Medical Center 717-531-5033 or call 1-800-243-1455.**

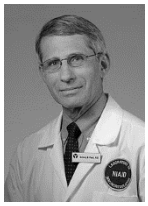
- **WellSpan Health---Coronavirus questions https://www.wellspan.org/coronavirus**
  Call for coronavirus related prevention, regarding care information risk, screening, and instructions hotline at 855-851-3641.

- **Parochial Medical Center- 1065 W Main St, New Holland, PA 17557--**call 717-556-0702

- **Johns Hopkins University- Johns Hopkins University is a private research university in Baltimore, Maryland. It was founded in 1876 and is America's first research university and home to nine world-class academic divisions working together as one university. www.jhu.edu**

- **Dr. Paul A. Offit, MD--General Pediatric Infectious Disease**

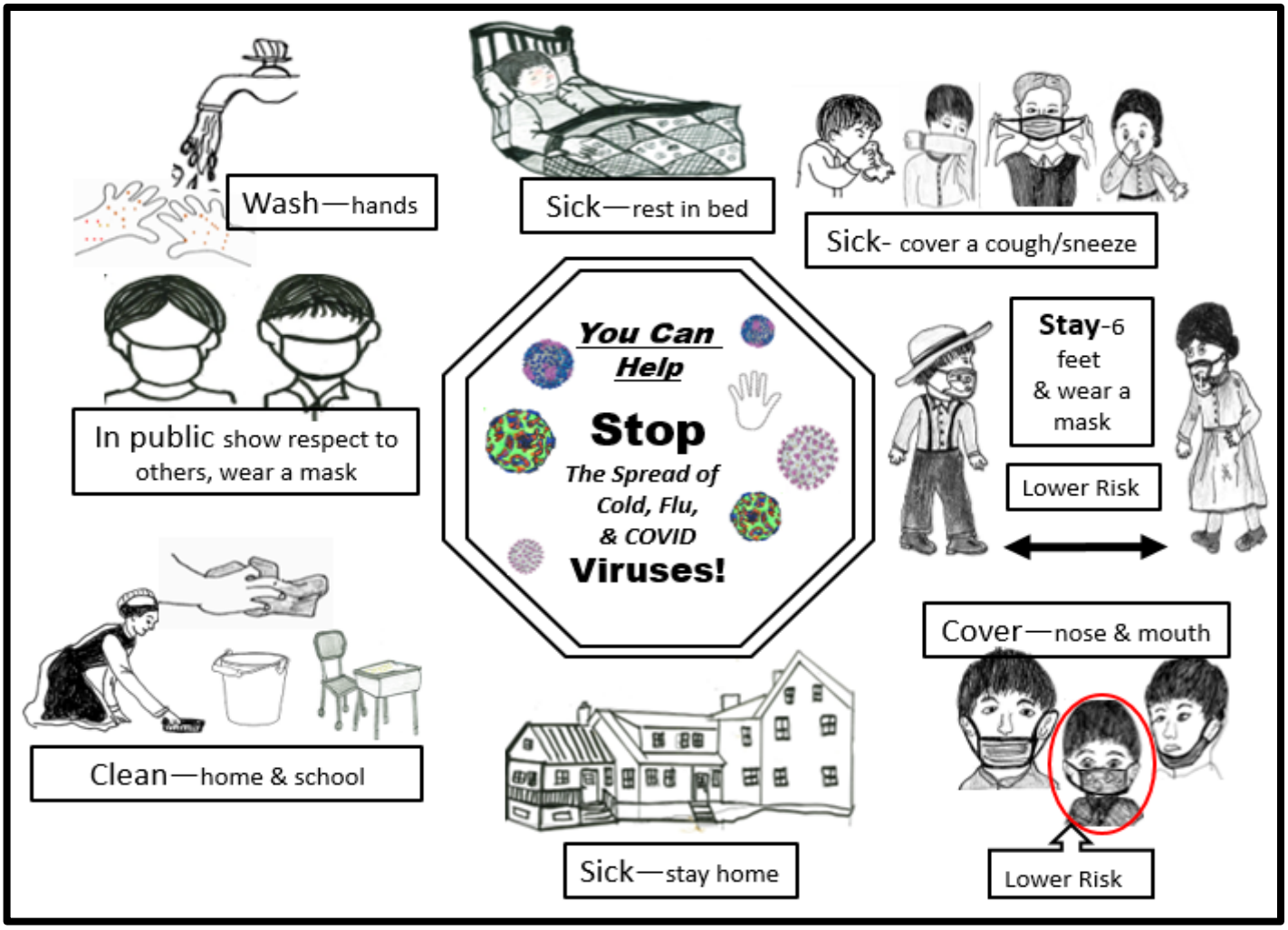
Children's Hospital of Philadelphia, Hospitals of the University of Pennsylvania-Penn Presbyterian. Dr. Paul A. Offit is a pediatric infectious disease specialist in Philadelphia, Pennsylvania and is affiliated with multiple hospitals in the area. Paul A. Offit | Faculty | About Us | Perelman School of Medicine | Perelman School of Medicine at the University of Pennsylvania (upenn.edu)



- **Dr, Fauci is the director of the National Institute of Allergy and Infectious Diseases. He is a physician and has served American public health for more than 50 years. https://www.biography.com/scientist/anthony-fauci**

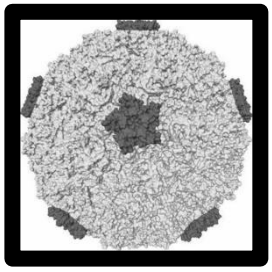
Your Local Phvsician or Medical Health Center.

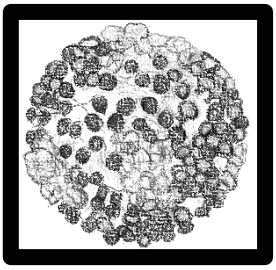
Additional Reference

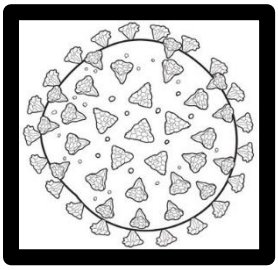


Watch, Know, and Seek Medical Care Early for COVID-19

	Cold	Flu	COVID-19
Exposure till ill	1-3 days	1-4 days	2-14 days
Symptoms start	Gradual	Abrupt	Gradual
Illness duration	7-10 days	3-7 days	Undetermined
Symptoms	Cold or allergy Itchy eyes, stuffy nose & sneezing	Fever, fatigue, body aches, cough, worsening symptoms	Shortness of breath, fever, fatigue







Follow the *4 W's:*

Prevent Exposure to Cold, Flu or COVID-19 Illnesses!

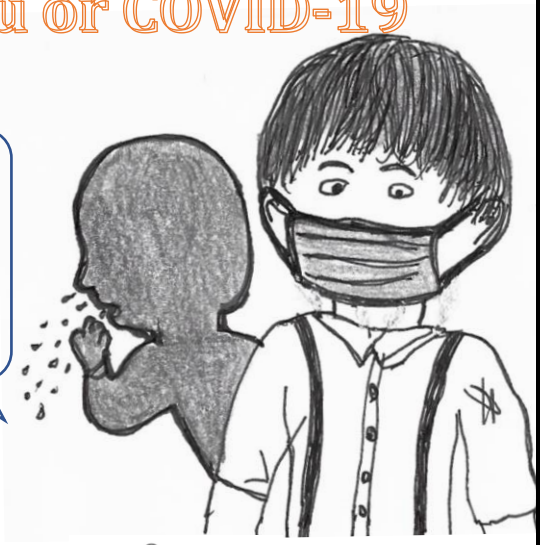
Wear-

A Barrier!

A barrier prevents your germs from reaching others.

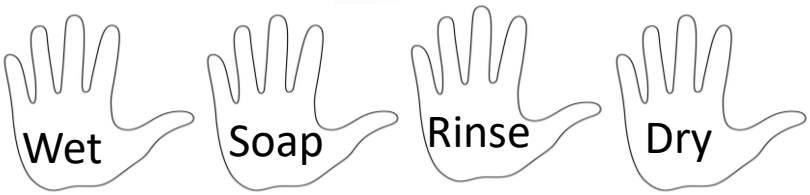
A barrier decreases the number of gems you inhale: less germs can lessen how sick you get.

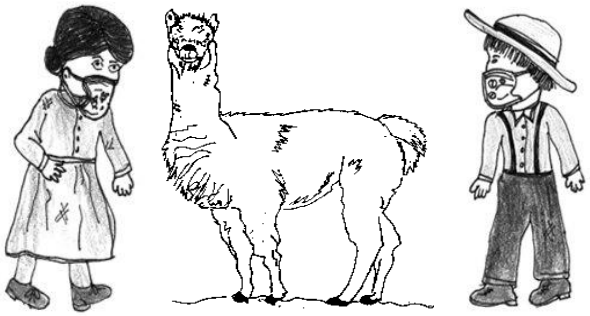
It's not easy to cover or block a sneeze or cough.



Wash-

"Happy birthday to me, happy birthday to me"…..





Watch-

Your distance, stay 6 feet apart, gather in small groups, and wear a mask in public.

Wait-

Waiting at Home Until You feel well is showing KINDNESS!

Tell:

What

When

How

Why

"Funding for this booklet was provided by the National Institute for Occupational Safety and Health (2U54OH007542) through the Northeast Center for Occupational Health and Safety: Agriculture, Forestry and Fishing".

Just the Facts: COVID-19 Illness:

- ✓ Is Caused by a NEW VIRUS: First Noted Spring of 2019 and On-going.
- ✓ Is a Pandemic: Spread Worldwide.
- ✓ Is Spread by Direct Contact: Hands to Mouth.
- ✓ Is Spread Person to Person: Via Droplets (virus in liquid) in the air.
- ✓ Causes: Mild, Moderate, or Severe Illness and/or Deaths.
- ✓ Can Affect: Me, My Family, Friends & Neighbors.
- ✓ Can be Serious if someone has Health Problems/Weakened Immune System.
- ✓ Is Very Contagious: 10 times more contagious than a flu virus.
- ✓ Can Be Slowed Down by "Me" By Just Scattering Some Kindness.