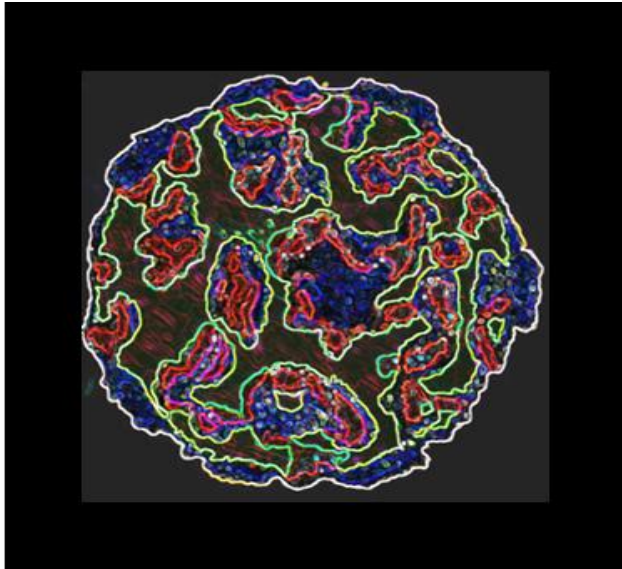


“COVID-19 Educational Activity Booklet for the Plain Community”

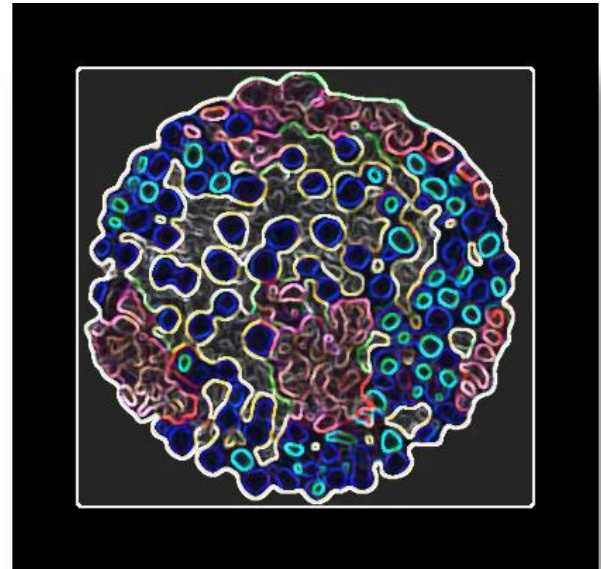
Information About Cold, Flu, and the COVID-19 Viruses:

Respiratory Viruses!

COLD Viruses



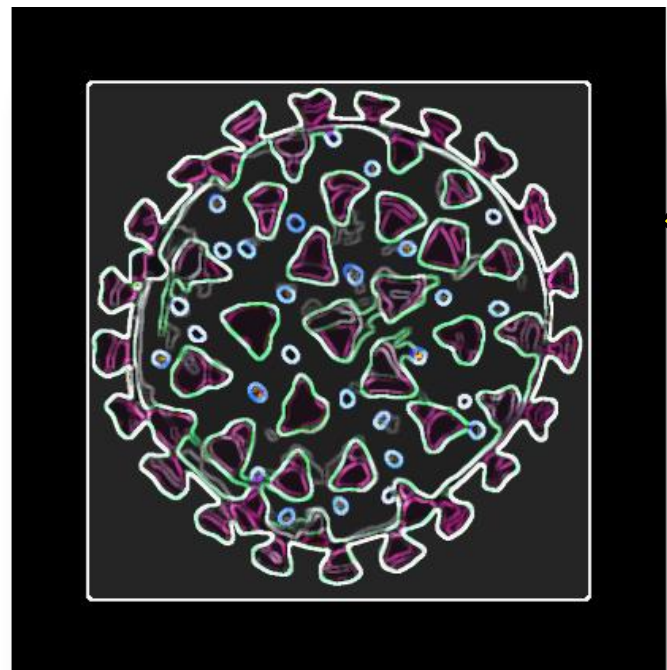
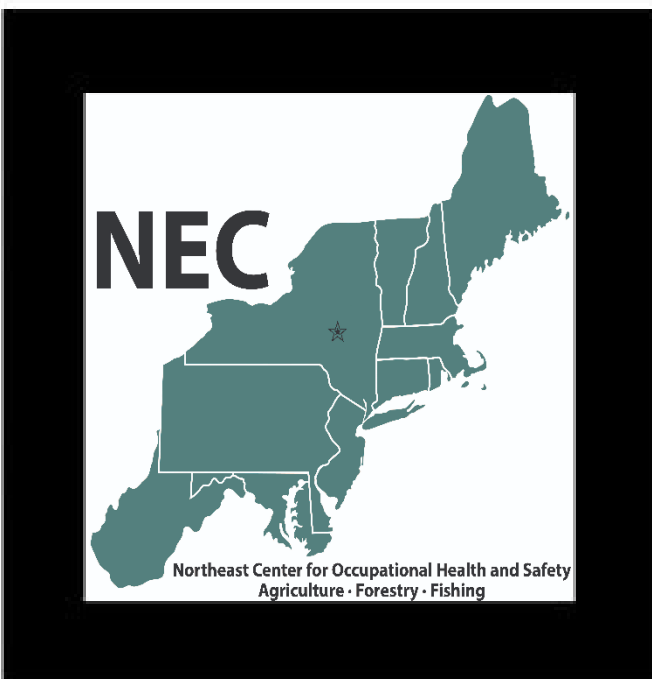
Flu Viruses



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, and school. Some illnesses result in medical bills or the loss of a loved one.



Respiratory illnesses

occur every year especially in fall and winter. The Spring of 2020, a new virus (COVID-19) entered the world; it continues to make people sick across the world.



It is called a "pandemic" which means a disease that spreads over a wide geographic area and 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-altering medical conditions, or in death.

Table of Contents:

+ Activity Pages

- Facts About Colds, Flu, and COVID-19 Virus---3-11.
- All About Germs---12-18.
- Ways to Boost Your Immune System---19-21.
- The Story of Smallpox and Polio Disease---21-24.
- Hazards: Cause of Harm and Increased Fear---25-27.
- Prevent Respiratory Illness (Colds, Flu, and COVID-19):
 - Wear-A Barrier---28-35.
 - Wash-Your Hands---36-37.
 - Watch-Your Distance---38-39.
 - Wait-At Home If Sick---40-43.
- Reference Material for Families---44-50.
- Back Cover---51.



10,000

New Viruses

That Seek a new body cell!



This booklet is a coordinated effort to decrease respiratory illness and deaths in the Plain Community.

Contributors include:

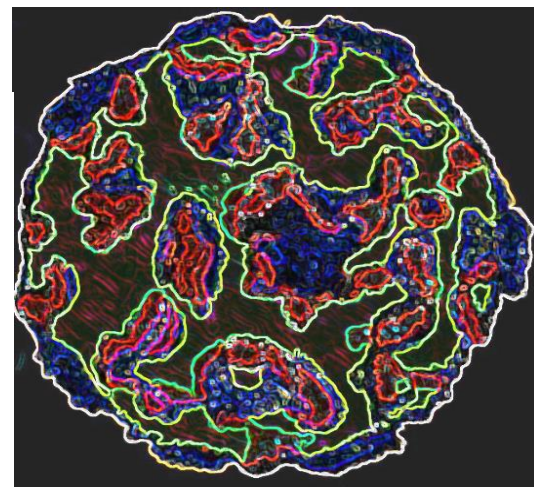
Kay Moyer-Nurse Safety Educator-Call 717-394-6851 or 717-665-6219, Dr. Keith Wright-WellSpan, "Parochial Medial Center", Prof. Steven Nolt, English-Carolyn Nelson, Nurses, and Key Plain Community Members.

Thanks Everyone Who Helped Create This Booklet!

Cold: A Respiratory Illness

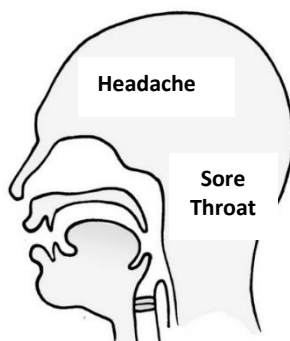
Did You Know?

- Every year adults will have 2-3 colds. Children will have more.
- The name of the virus that causes a cold is **rhinovirus**. ['rīnōvīrəs]
- A cold virus spreads through the air and can infect those in close contact with an ill person.
- 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:

Runny Nose



❖ Spread----



- A cold begins in 1-3 days after exposure. A person is **contagious** 1 day before illness & for **5-7 days**.
- There are about **200 different cold viruses**.
- The virus attaches to the cells inside the nose and throat causing inflammation and “miserable” feeling.
- Your body makes a protein called an antibody to resist that cold virus. The antibodies will destroy the virus. However, it takes 7-10 days to make enough antibodies to end the illness.

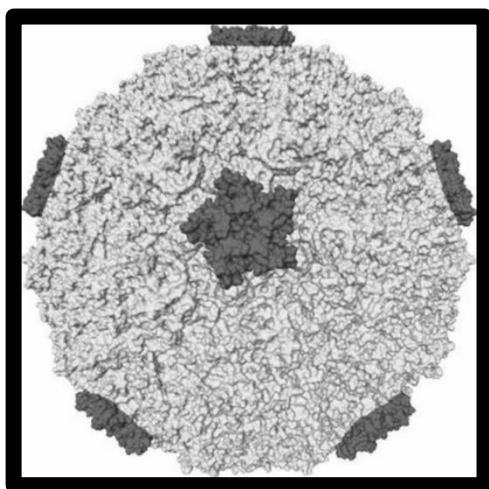
The good news—after a cold, your immune system will remember that virus. If you are exposed later to the same cold virus, your immune system will quickly make enough antibodies to destroy the virus before you become sick.

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.**

Researchers Suggest:

- The cold 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. Avoid exposure to a cold, flu, or COVID virus to prevent getting sick.



Color the flu virus.



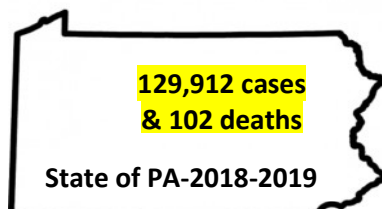
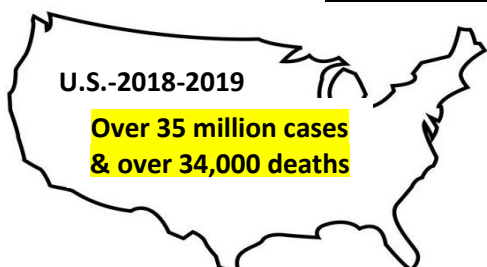
<https://www.cdc.gov/dotw/common-cold/index.html>

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

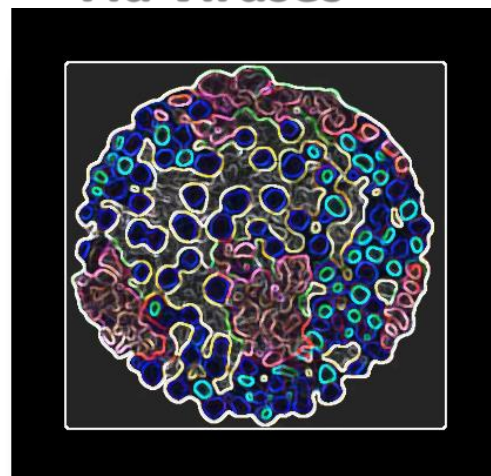
Influenza (flu) is a Respiratory Illness

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.



Flu Viruses



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 escape 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 so the flu virus is not spread to other family members or school friends.

Note:

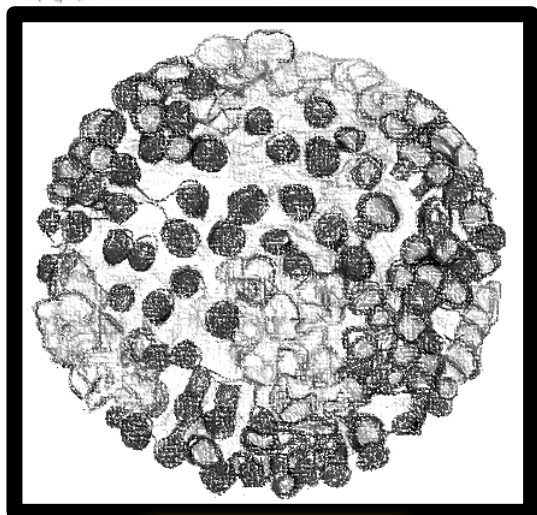
- The less moisture there is in the air, the happier the flu virus seems to be.
- The colder and drier the air, the more flu cases there seem to be.



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

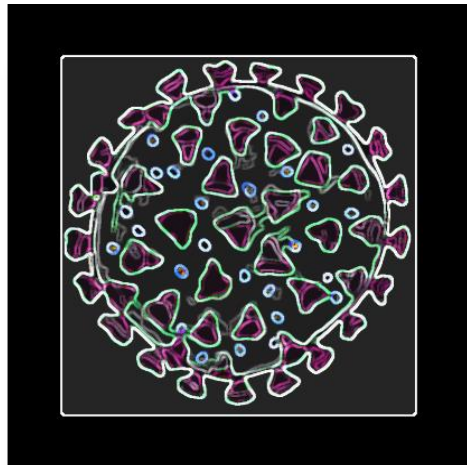
Did You Know?

- 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
- 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.



Color the flu virus.





COVID-19 Virus

COVID-19

'Co' = CORONA

'VI' = VIRUS

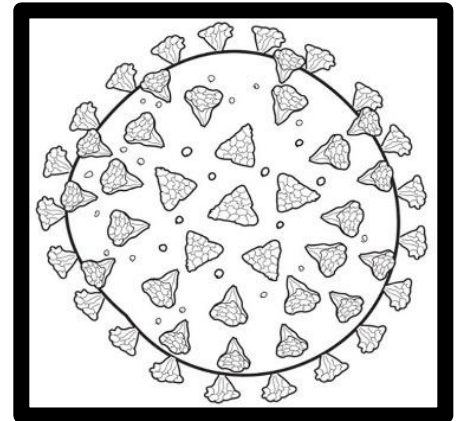
'D' = DISEASE

'19' = 2019

Color the flu virus.



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



Facts About the COVID-19 Respiratory Virus:

- Symptoms can be mild, moderate, or severe. Person is contagious up to 2 weeks after symptoms disappear.
- Older adults & those with underlying medical conditions (heart disease, lung ailments, diabetes mellitus, high 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 makes it easy for the virus 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 infected but does not feel sick (**asymptomatic**).

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

Have you heard the term 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 high fever, **Call 911** and tell them the person may have COVID illness.

The “1918 Flu”

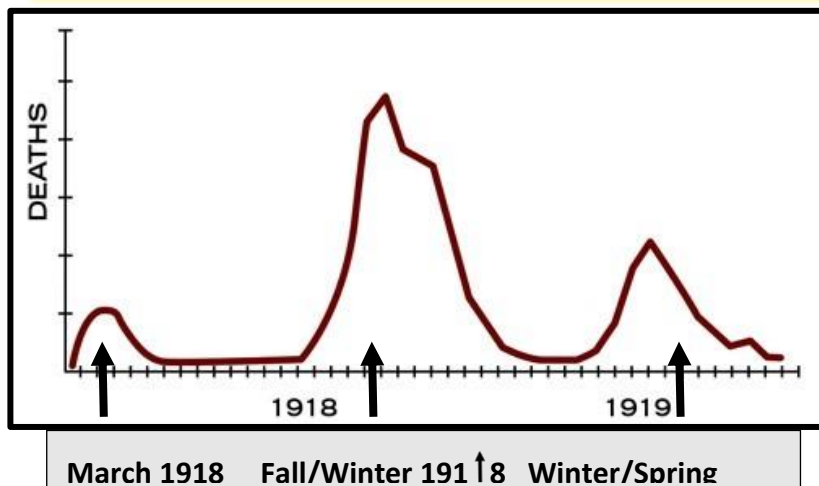


Unless you are over 100 years old, you may not know much about the “Pandemic of 1918”.

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 were young people ages 20-40.



<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.

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

There were no antibiotics to treat the bacterial pneumonia that the flu caused.

Researchers did not know what was causing the illness because people were not able to see viruses until 1930 when electron 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/pandemic-resources/1918-commemoration/1918-pandemic-history.htm>

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



COVID-19: A NEW Respiratory Virus

A new respiratory virus appeared late 2019 and continues today. The cause is a coronavirus (a large family of viruses that cause respiratory illness) known as COVID-19. usafacts.org/visualizations/coronavirus-covid-19...Note the number of cases & deaths in (PA, NY & USA) as of **1/9/2021**.

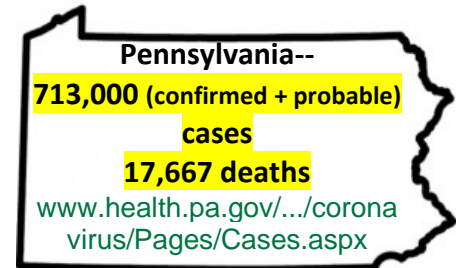
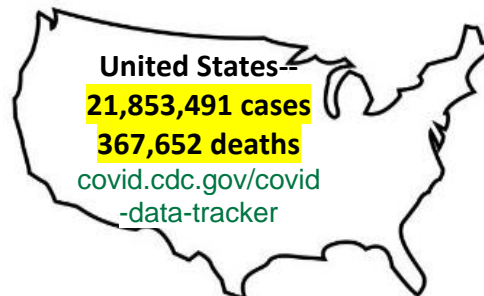
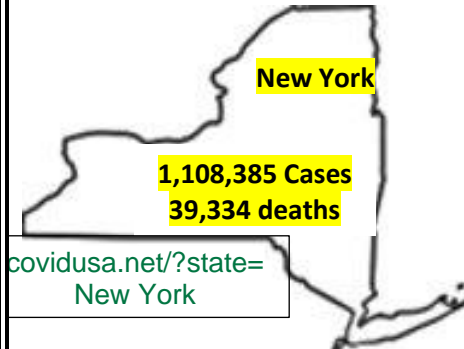


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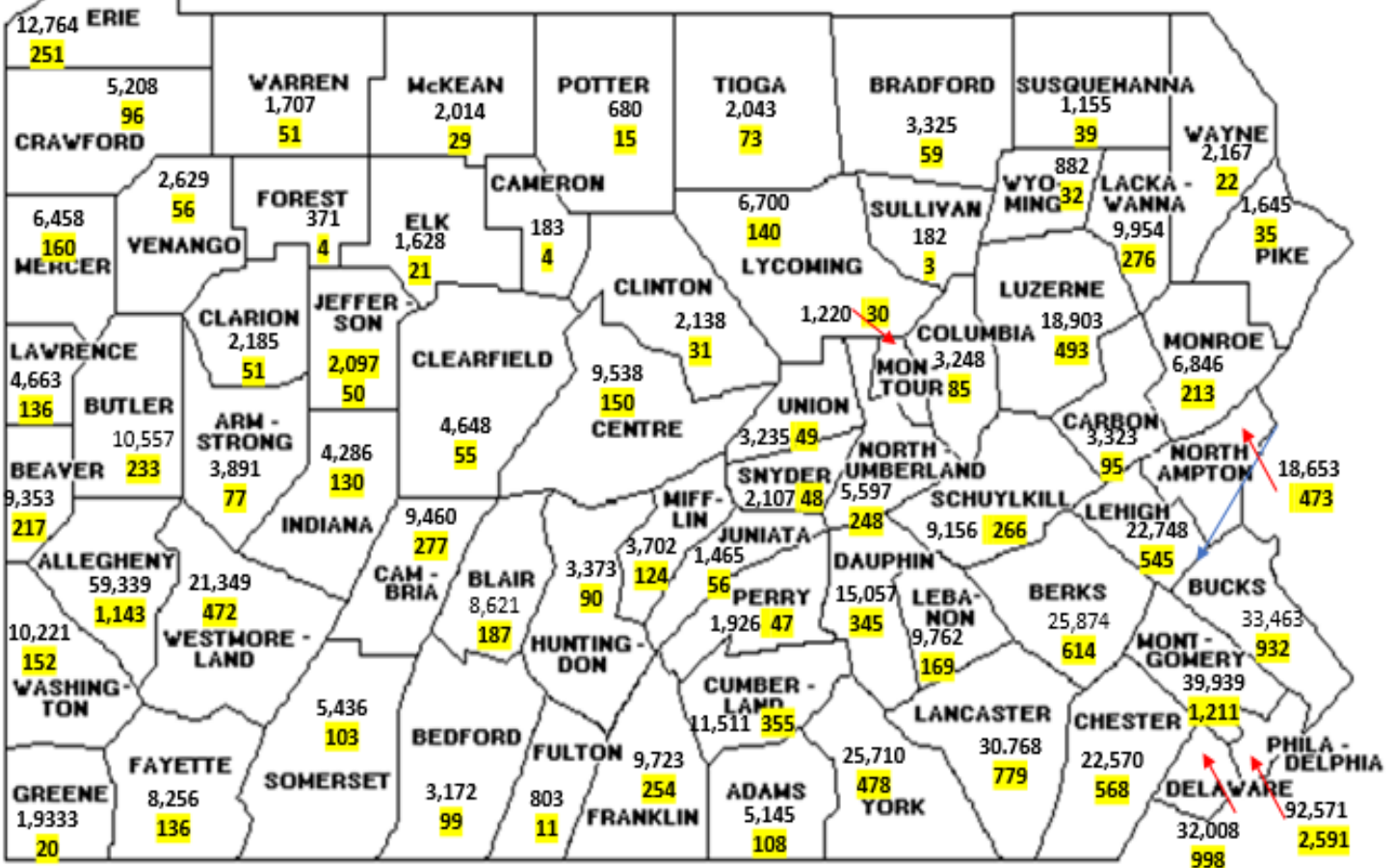
Worldwide—covidstatistics.org

89,949,646 cases

1,932,046 Deaths



Note: County Cases in White & Deaths in Yellow



Many who survived a COVID illness:

- Needed extensive hospital care and some were in the hospital for weeks to several months.
- Needed assisted breathing and were on a ventilator for weeks.
- Needed a longer time to recover, after the illness, compared to the flu— (weeks to months).
- Were left with life-long physical and/or mental handicaps---damage to heart, kidney, brain, or lungs.



COVID-19: A NEW Respiratory Virus Continued

8

Over 1,000 nurses and doctors got sick and lost their lives 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 avoid needing medical care for a COVID infection.

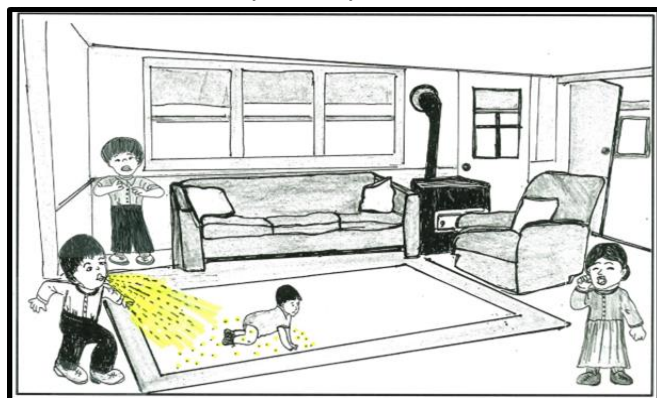


Thank You!

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 circulating 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 getting infected 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 recovered from a COVID infection **DO HAVE** protective antibodies (Memory Cells) in their blood, that will recognize and destroy a 2nd COVID exposure. The question is how long do they have Memory Cells that could prevent another infection?
- ❖ This new research indicates that antibodies to COVID only last around 6 months after illness. See article ([COVID-19 reinfection unlikely for at least six months after recovery, study finds](https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations) - UPI.com)
- ❖ Some diseases (like measles) may result in a life-time immunity, but several studies as above, show there is no lasting immunity---only a few months after surviving a COVID infection.
- ❖ A COVID vaccine could provide antibody protection to prevent a COVID illnesses.

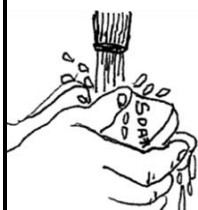
<https://www.cdc.gov/flu/about/keyfacts.htm>

<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 Johns Hopkins University.

The New COVID-19 virus is:

- Not a living organism and can only multiply 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 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 protects 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 break down the virus protective coating, 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.
- 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 like a bacterium. Antibiotics can only destroy a bacterial infection.
- 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).

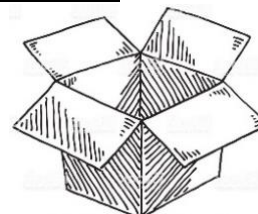
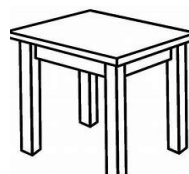
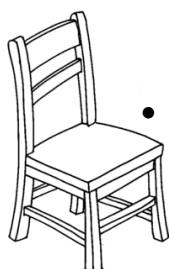
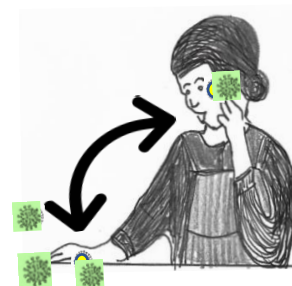


Dissolve the fat protective layer:
Destroy the virus!

Bleach

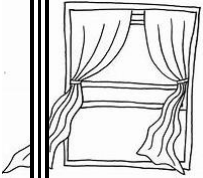
to

Water

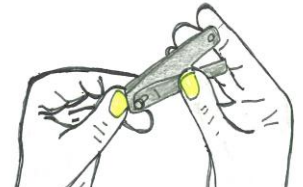


The New COVID-19 virus is:

- Able to float in the air up to 3 hours and can lodge and attach to cells in our nose, eyes, and mouth.
- Very stable (not broken down) in external cold and in air-conditioned homes, work sites, and even in air-conditioned cars or trucks.
- Very stable (not destroyed or broken down) if the environment is dry and warm.
- Very stable in an environment that is dark.
- Broken down when the virus is exposed to UV light.
- Not able to go through healthy skin.
- Not destroyed by VINEGAR because vinegar does not dissolve the fat layer.
- More concentrated in a confined small space (like a school room or small workshop) than in a bigger space like a barn, shed, or big building.
- Found in less amounts in an environment where there is more natural VENTILATION.
- Able to hide in small cracks in hands. Keeping hands moisturized prevents the virus molecules from hiding in the small cracks.

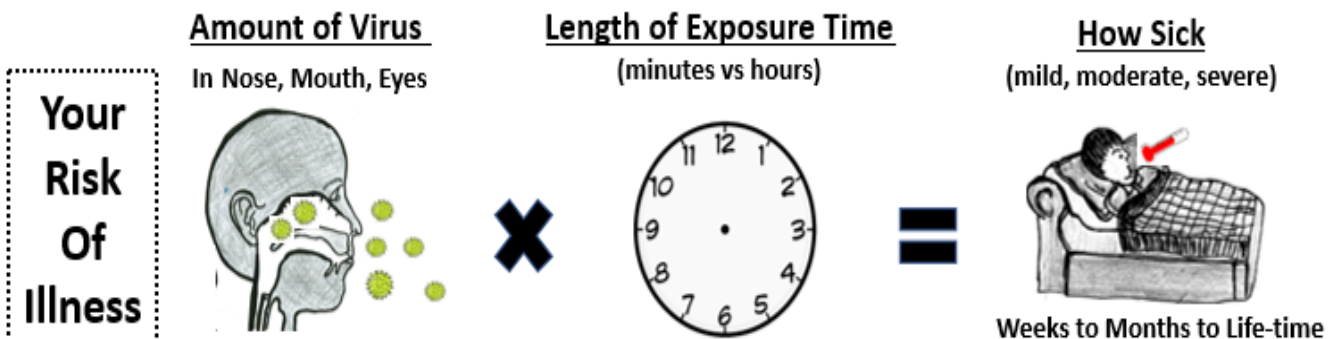


- Able to live under fingernails, so keep your NAILS short so the virus cannot hide there.



Research shows that

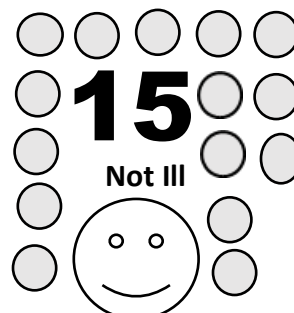
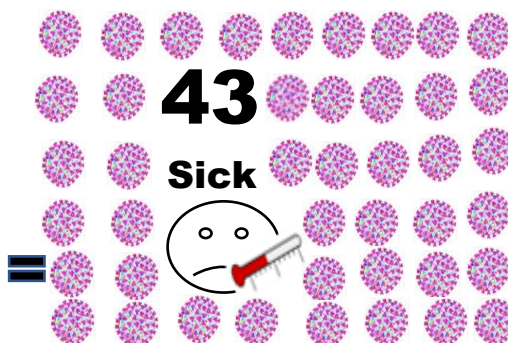
the amount of virus **X's** the length of exposure time =
the risk of illness.



A True Story: How One Person Spread COVID-19

Centers for Disease Control and Prevention (CDC) reported that in Washington state, one-person who was sick with COVID-19, attended 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

+

1 person
sick
COVID-19
in 2 ½ hrs.

=

&

15

Not Ill

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

Facts:

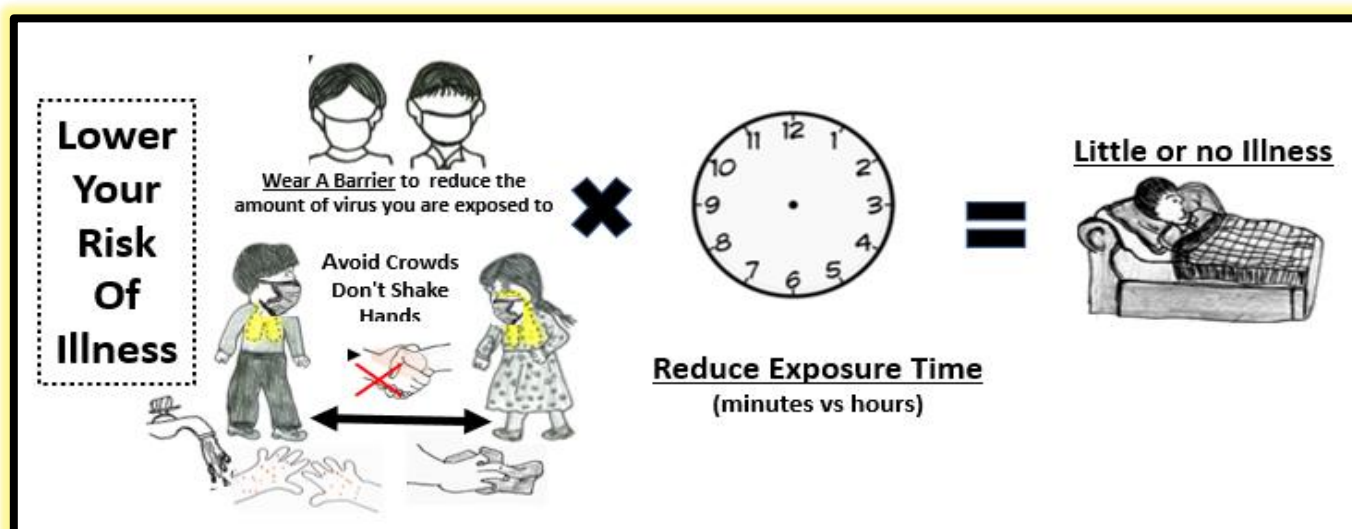
- There was no physical contact between each person, but they sat close together.
- The chairs were 6-10 inches apart. Only a few seats were kept empty between chairs.
- The choir broke into 2 groups and had close contact for 45 minutes.

Respiratory viruses:

- Escape from the nose & mouth in small droplets (tiny drops of liquid containing a virus)
- Exit our mouth when singing, talking, yelling, coughing, sneezing, or just breathing.
- Are small, tiny droplets that can be found floating in the air vapor.
- Can remain in the air up to 3 hours.

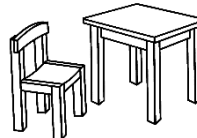
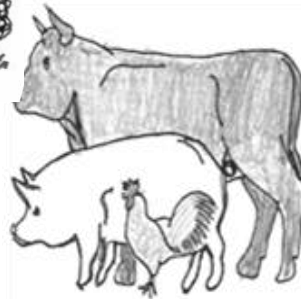
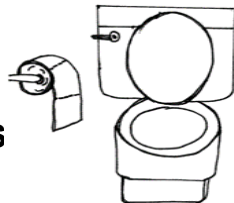
Key factors in being exposed and infected by a respiratory virus include:

- 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 eraser



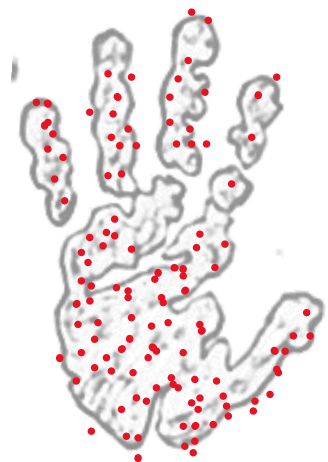
Germs can be found on:

- 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.

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.

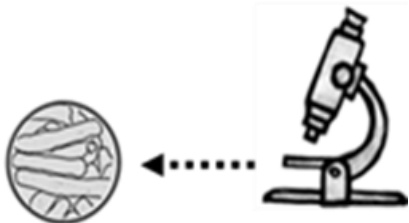
At any given time, a human hand, may contain as many as 5,000 germs.



Germes Are Tiny Living Things

Germes (bacteria or viruses) are so small that we cannot see them with our eyes, a magnifying glass, or even with a microscope.

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



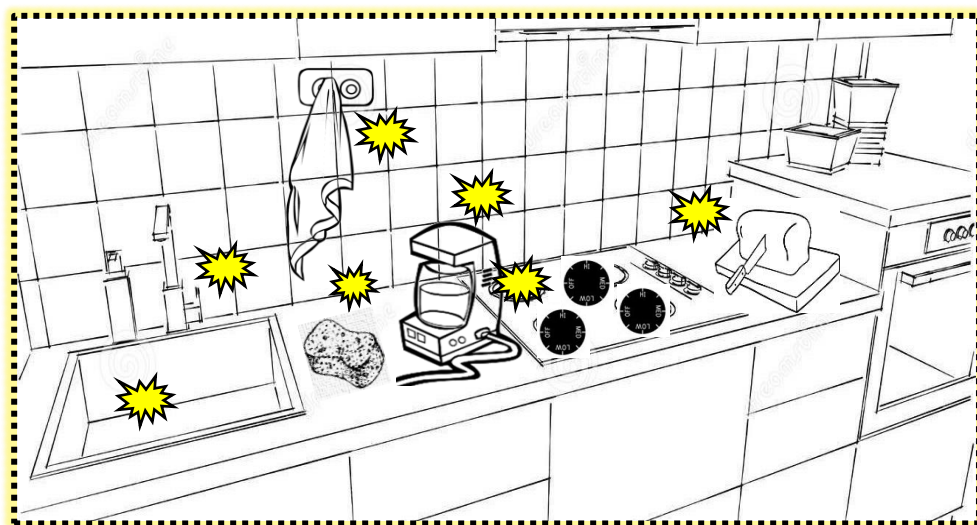
Germes are invisible, meaning we cannot see them with our eyes or a magnifying glass.

The 10 areas in your home with the most germes include:

- ✓ 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

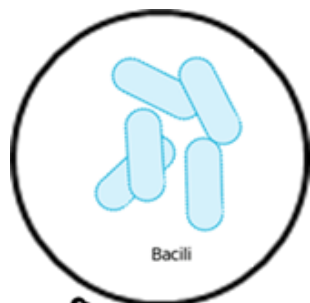
WATER

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



Bacilli

Short Sticks

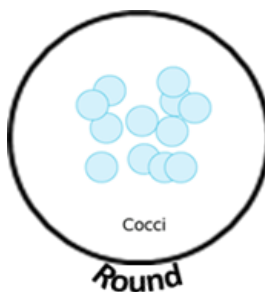
Bacteria



Spirilli

Twisted Spirals

Bacteria

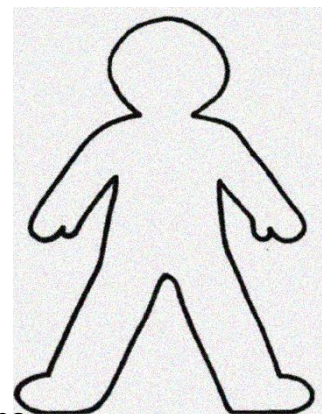


Cocci

Round

Bacteria

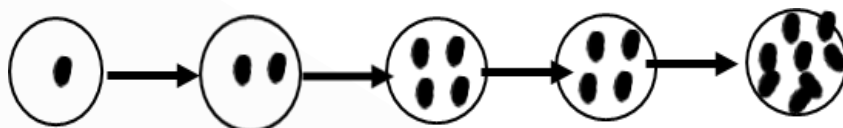
Your body has about
4 pounds of bacteria?



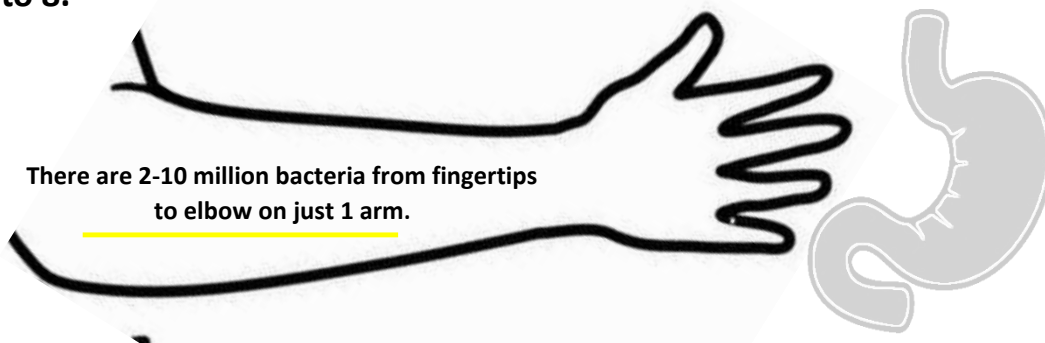
Did you know?

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 on just 1 arm.

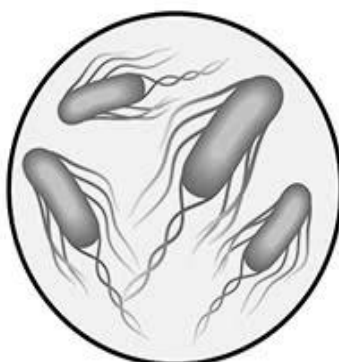


Good Bacterial Flora



BIFIDOBACTERIA

The various strains help to regulate levels of other bacteria in the gut, modulate immune responses to invading pathogens, prevent tumor 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.

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.

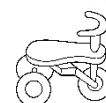
A virus ranges in size from 0.4 to 0.25 micron.

Bacteria or viruses can only be seen with a powerful microscope, like an electron microscope.

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

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

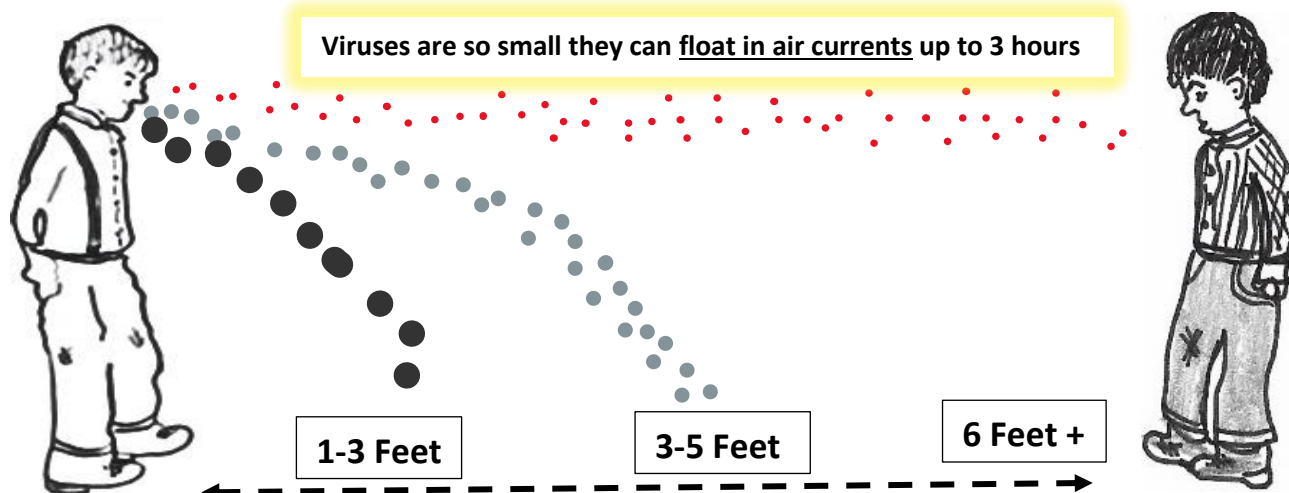
Note: **most viruses** would be the size of a **small tricycle**.



<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.

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

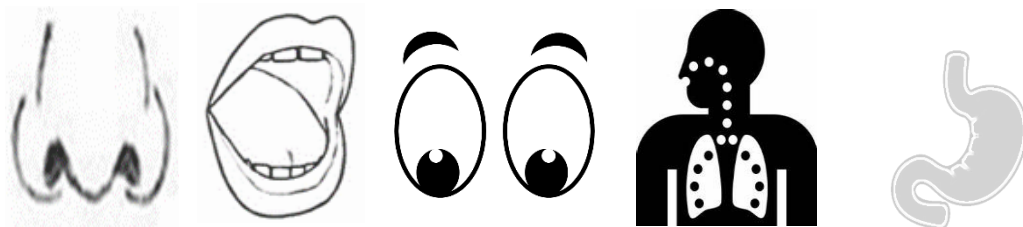


Rubella virus

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

More About Viruses

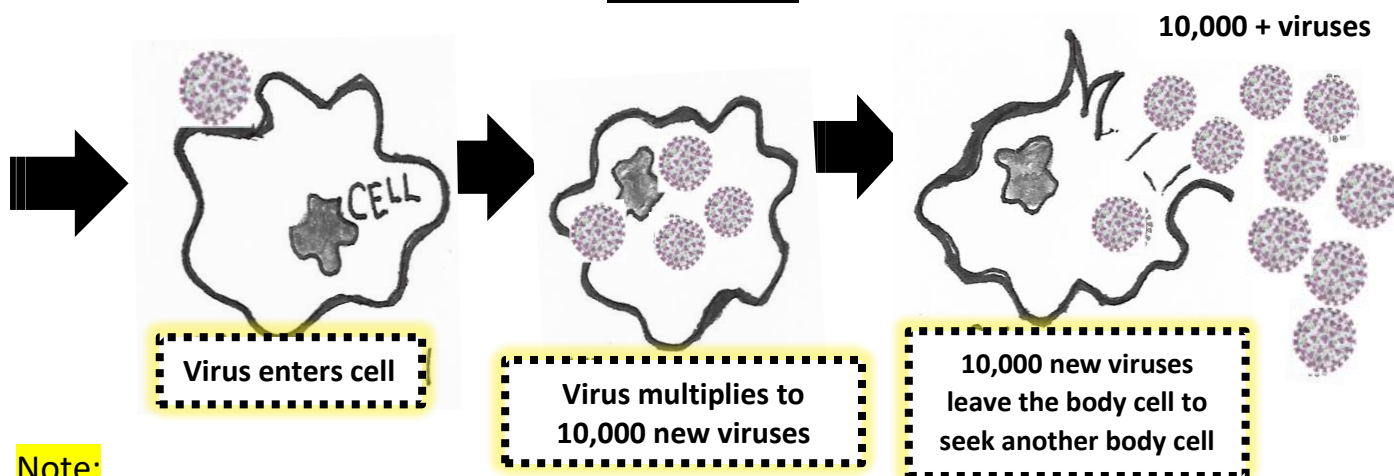
A virus goes inside a healthy body cell *and makes copies of itself*. Eventually the cell breaks open and each new virus looks for another body cell to attach to and multiply.



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

Virus Grows & Multiplies

New Viruses Escape



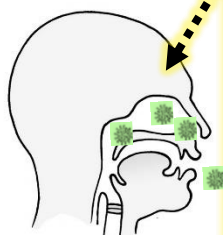
Note:

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:



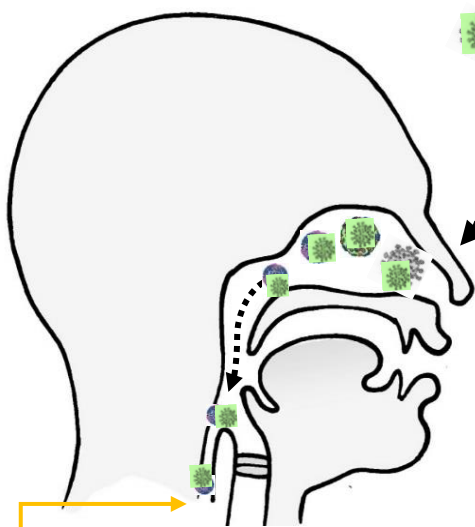
- Is very effective at entering the cells in our nose and upper respiratory system.
- Prevents early distress signals that communicate to your body that something is wrong, like a fever or feeling tired.
- Prevents your immune system from knowing that an invader has entered and is rapidly multiplying.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

Note:

Note: The number of virus particles and time you are exposed to the virus can affect how likely you are to have a mild, moderate, or severe illness

Respiratory Viruses Attach to the Cells Inside Your Nose

18

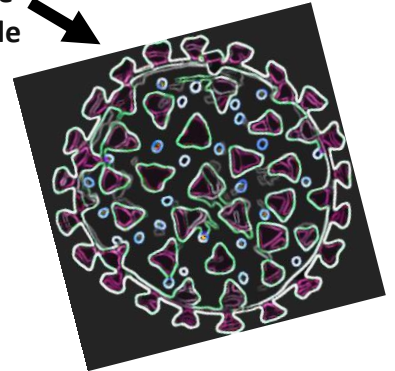
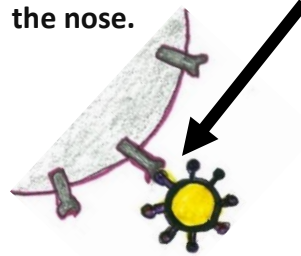


Respiratory viruses (cold, flu, & COVID) seek out the cells found right inside our nose.

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 grow and multiply (make copies of itself). So many copies are made that the cell eventually 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.

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

<input type="checkbox"/>	1,000 viruses
<input type="checkbox"/>	3,000 viruses
<input type="checkbox"/>	5,000 viruses
<input type="checkbox"/>	10,000 viruses

Answer: 10,000

Wearing even a non-medical mask, blocks most large (virus-carrying) droplets that are expelled into the air by a cough,



Achoo!



Achoo!

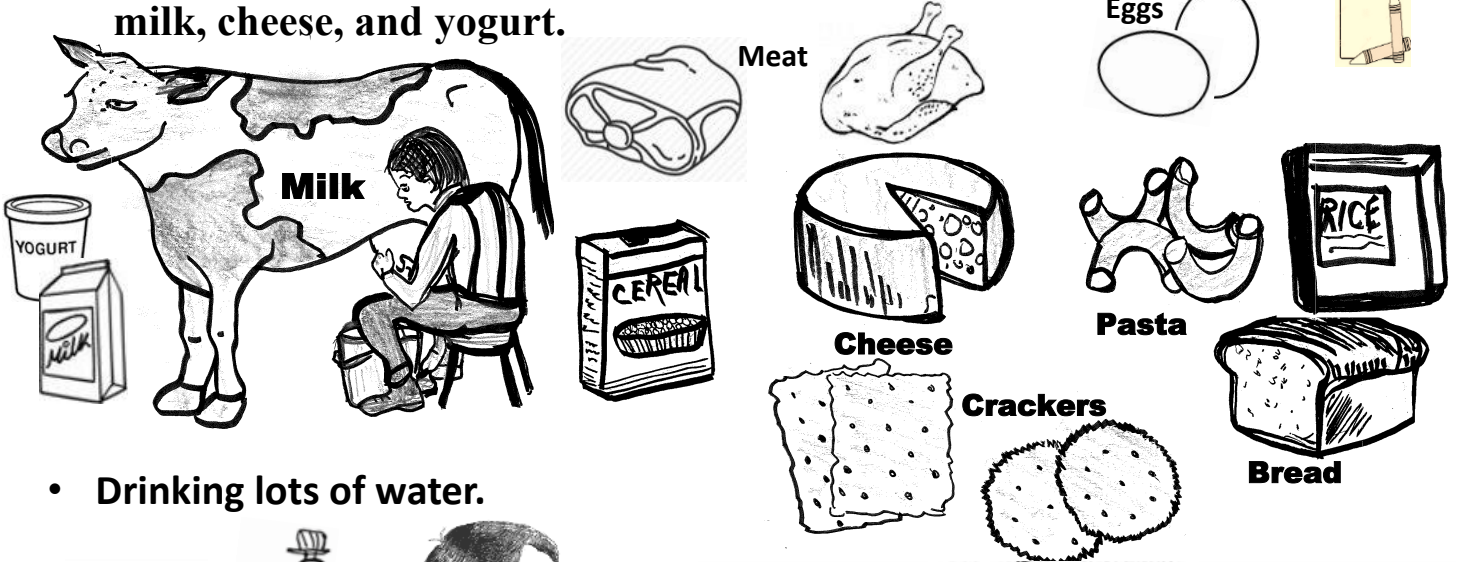
The amount of virus
X's
the length of exposure time
(minutes vs hours)
=
the risk of sickness.

Boost Your Immune System: Fight-off Respiratory Viruses

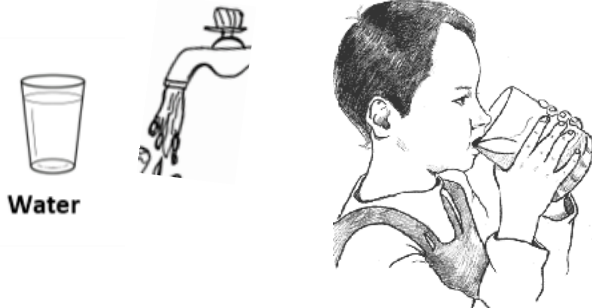
19



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



- Drinking lots of water.

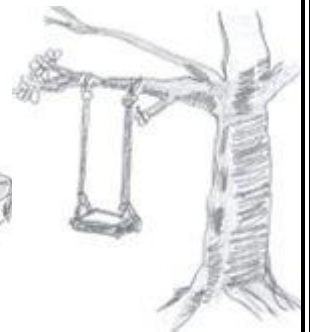


- Getting plenty of rest and sleep.

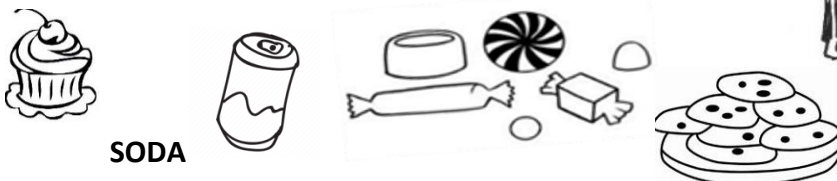


Boost Your Immunity To Diseases!

- Getting plenty of fresh air and exercise.



- Eating less sugary treats and sweets.



- Brush your teeth 2 times a day.



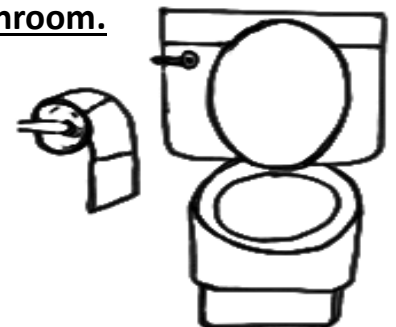
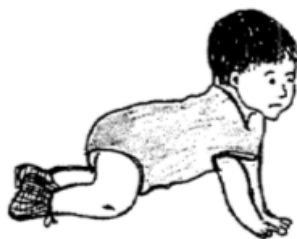
• **Boost Your Immunity**
Prevent Getting Sick!



- Wash your hands before eating or making food.

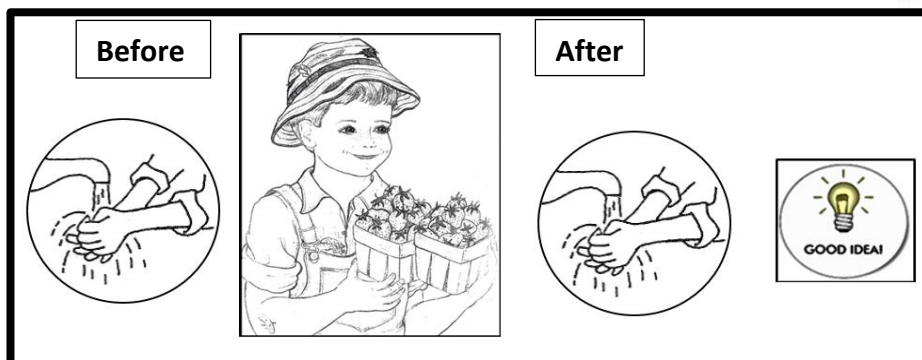


- Wash your hands after diapering a child or after using the bathroom.

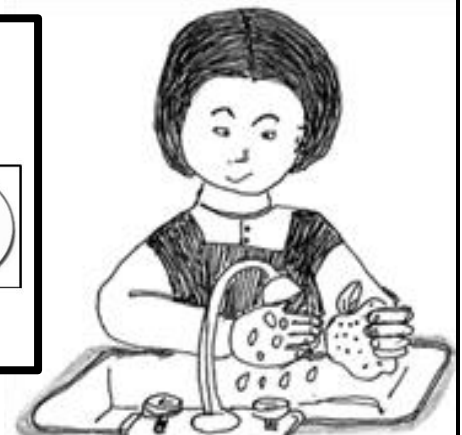


- Wash your hands before and after picking fruits and vegetables. Wash produce from a roadside stand or the store before eating to reduce any germs or pesticide residue

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



Be Food Safe!



Your Body's Immune System

21

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 from getting ill.



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

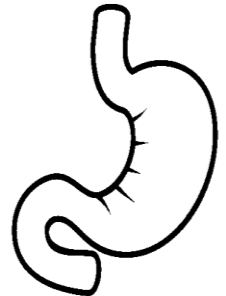


- **Your nose.** Your nose has hairs inside that catch dust and germs before they can get into your lungs. The germs and dust tickle your nose inside, causing you to sneeze them out.



- **Your mouth.** Your mouth and throat are wet with saliva. Some germs get stuck in the saliva, trapping them so they cannot 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.



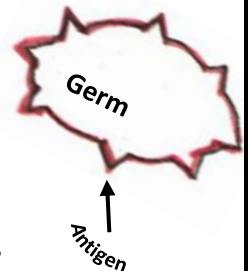
- **Fever.** Fever is one way your body fights infection. Bacteria and viruses are heat sensitive. Some fever is needed to help destroy the germs, but children may seizure when they have an extremely high fever.

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

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

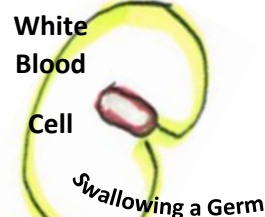
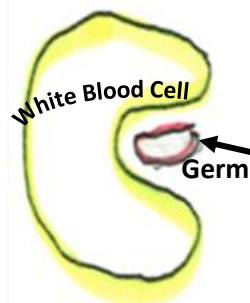
A protein on the surface of a bacteria, virus, fungi, or parasite is called an antigen.

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

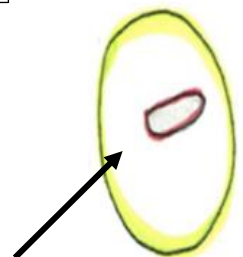


Your Body Produces White Blood Cells That Fight Germs.

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



Germ destroyed by white blood cell.



How Your Body Destroy Germs

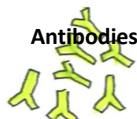
"Plasma Cell"

Recognizes

foreign antigen
(germ)

& makes antibodies
that destroy the
infection!

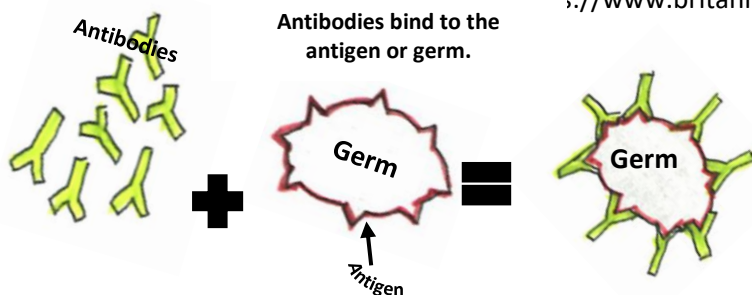
Antibodies



When a cold, flu, or the COVID virus attaches to the cells inside your nose, throat, or eyes, it causes 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.



Antibodies bind to the
antigen or germ.

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

"Memory B Cells"

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. So, when our immune system is exposed to a germ it previously destroyed, Memory B Cells to that germ, can quickly multiply and destroy the germ before it can make you ill.

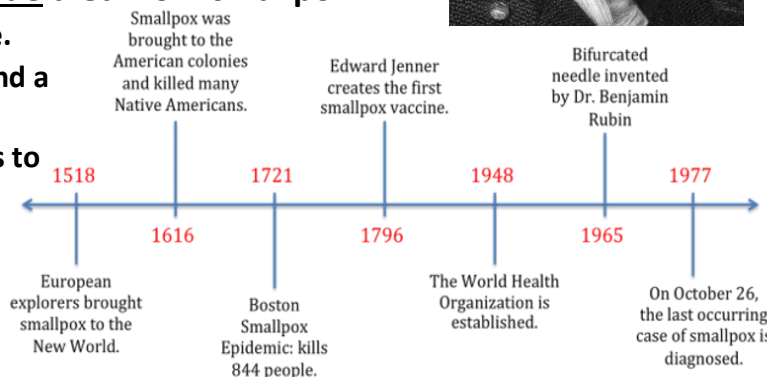
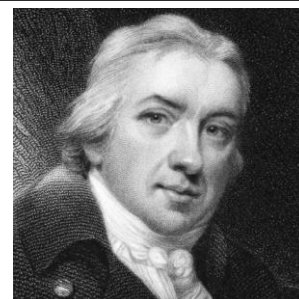
The Story of Smallpox.

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 explorers.
- 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 scars all over the body.

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

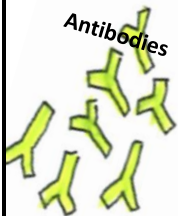
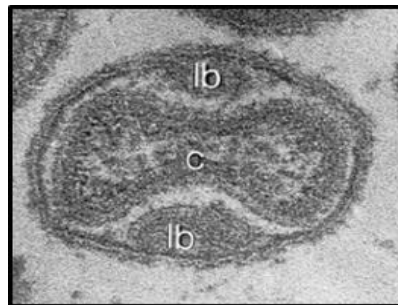


The reason a child does not need to get a smallpox vaccination before starting school today is because:

- Dr. Edward Jenner noticed young women who milked cows got sores on their hands, but rarely did they get smallpox.
- He thought getting a little cowpox germ would prevent 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. Weeks later, he exposed the boy to a tiny amount of the smallpox germ & amazingly, he did not get smallpox.

Cowpox Virus

Smallpox Virus



Antibodies create
"Memory B Cells"
Against the
Smallpox
Virus

- The young boy's immune system quickly recognized the invasion of the tiny amount of smallpox germ and quickly made antibodies that destroyed the germ before it could cause illness.



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 the 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".



The Story About Polio

Did you know that polio or poliomyelitis is a life-threatening 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.
- Was spread from person-to-person on contaminated surfaces.
- Lived in a person's throat in droplets & was spread by a sneeze/cough.
- Stayed in a person's feces for weeks & in contaminated food & water.
- Is spread before a person has symptoms to 2 weeks after illness began.
- Caused damage to the nervous system.



There have been no cases of polio in the U.S. since 1979 other than people getting it in another country and then coming to the "US". There are only three Countries in the world where there are polio cases.

It is estimated that 16 million people today are walking and not paralyzed because a vaccine was developed. The goal is to continue giving polio vaccine so that, just like smallpox, there will be no cases of polio in the world.

A TIMELINE ON POLIO

Prominent British physician Michael Underwood first notes a debility of children's lower extremities.

1789



1843

The United States reports its first polio outbreak.

1952

A U.S. peak: 57,628 cases, paralyzed 21,269 and 3,175 killed.



1950s-1960s

Dr. Jonas Salk develops the first polio vaccine. Dr. Albert Sabin's subsequent oral vaccine is widely used.



Polio is eradicated in the United States.

1979



(Images: © Shutterstock)

Sources: Centers for Disease Control and Prevention and New York University Grossman School of Medicine

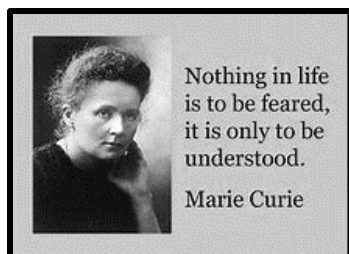
<https://www.cdc.gov/polio/what-is-polio/polio-us.html>

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 the body so the best treatment can be provided for the person.



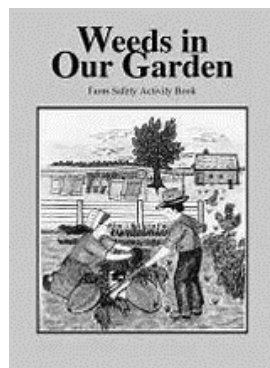
I like Marie Curie's quote about fear. Marie Curie said,

“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 decrease illness. We know that someone higher than us, cares about what happens in our lives, but we need to do our part by promoting preventive 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 areas or animals.

Farmers encourage everyone to keep safety a top priority. They take time to teach their children & workers safe work behaviors and encourage everyone to tell someone if they spot a potential hazard. Their efforts are well spent if one injury or death is avoided.

Hierarchy of Hazard Control!

Eliminate or Substitute. Enclosure or Barricade.

Engineering Control!

Use Safe Work Behaviors/Practices.
Training/written instruction.

Systems Control!

Supervision/Monitoring
Administration Control!

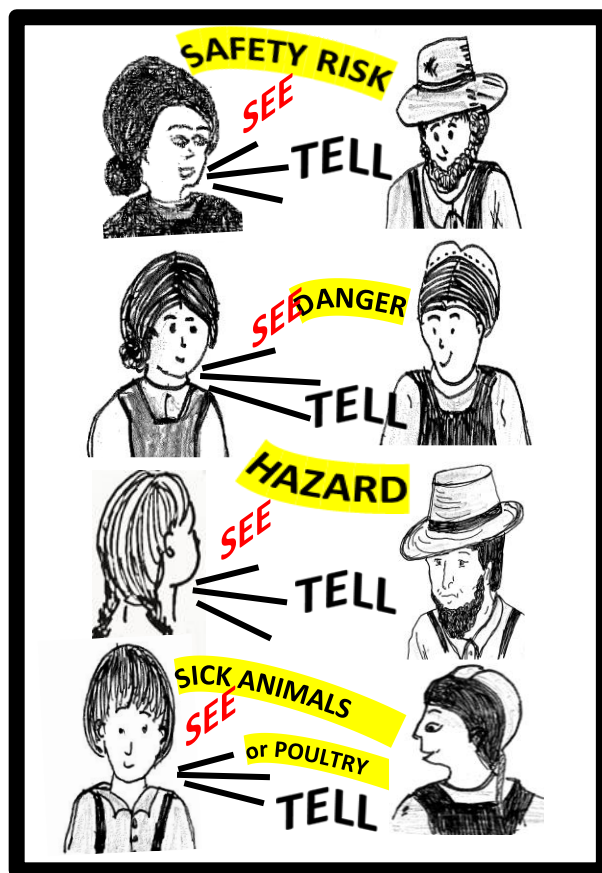
PPE:
Protect
worker

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

27

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.

Did you know there is 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 avoiding gatherings.

Next, **substitute**, if we cannot **eliminate**, by working from home.

Note: farmers have it over most of us; they are already at home with just their family.

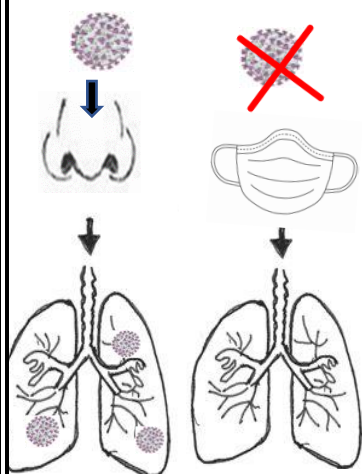
Increase hand washing, get medical care as needed, and when out in public: show respect and kindness by staying 6 feet



from others & by wearing a mask.



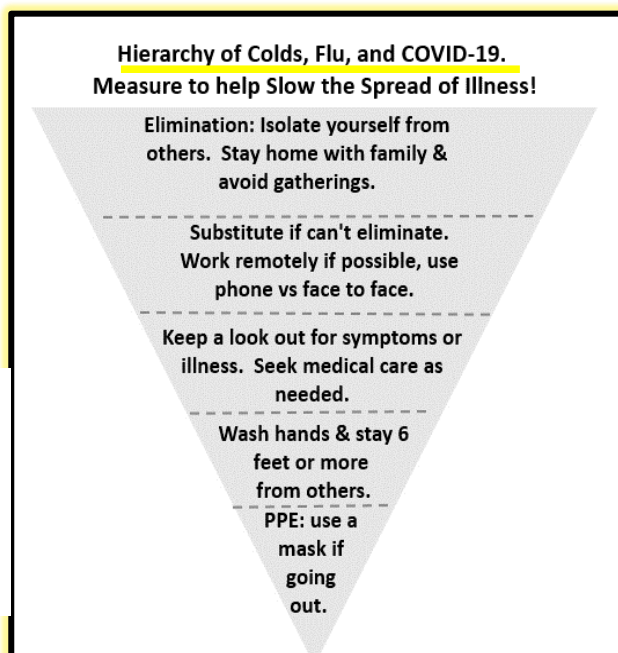
A mask prevents you from breathing in respiratory viruses that can cause illnesses.



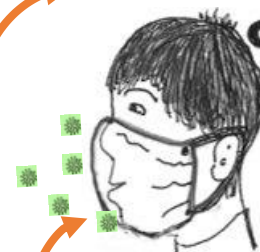
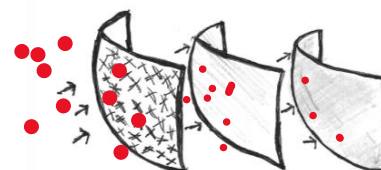
Did you know that a cotton mask of several layers, can filter out the larger droplets from getting through to the nose, mouth, and/or lungs?

Just several layers of cloth can decrease the amount of virus that a person is exposed to, much like using cheese cloth to filter out seeds when making jelly.

No, a cotton mask does not filter out as many germs as would an N95 mask, but it does block bigger droplets. In addition, you can lessen the number of virus particles you are exposed to by staying 6 feet away from others.



<https://www.cdc.gov/niosh/tonics/hierarchy/default.html>



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

28

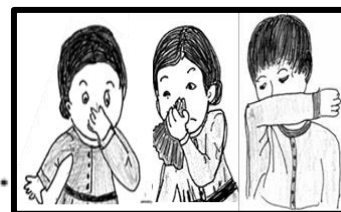
Follow the **4 W's**: **Wear A** Barrier, Wash Often, Watch Distance, Wait If Sick!

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 tickling 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>



Achoo! Achoo!

40,000 droplets @ 200 mph

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 escape 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.



3,000 droplets @ 50 mph

Did You Know That:

A cough can expel up to 3,000 droplets of saliva and can travel up to 50 mph.

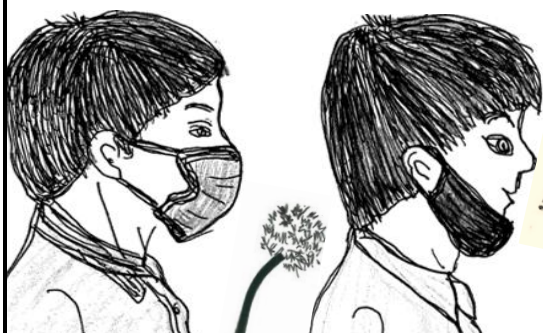
Wear a Barrier Continued

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 – 3 layers would increase protection.
- 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



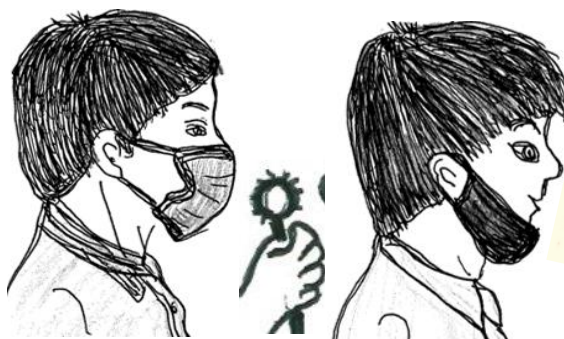
With a mask on, the boy could not blow the dandelion seeds into the air.



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



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



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

- 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.

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



NO protection



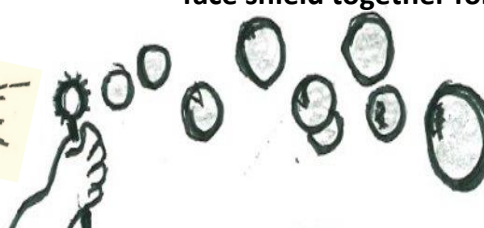
BETTER protection

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



BEST protection is both mask & Shield

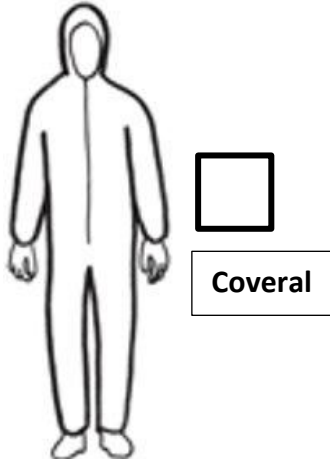
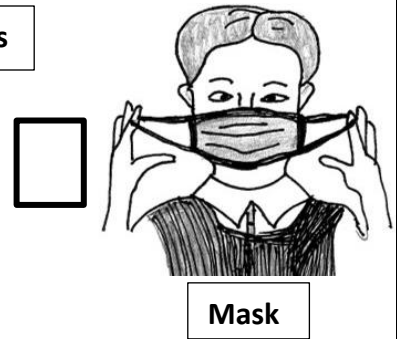
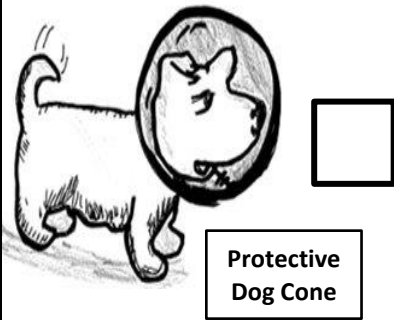
- Dentists, doctors, and nurses who are in close contact with patients, wear a face shield and a surgical mask as well. Wear a mask and a face shield together for best protection.



Protect Your Health Match Game

30

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



A. A barrier to keep flies 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.

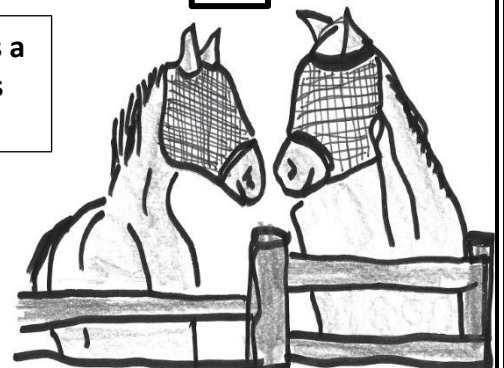
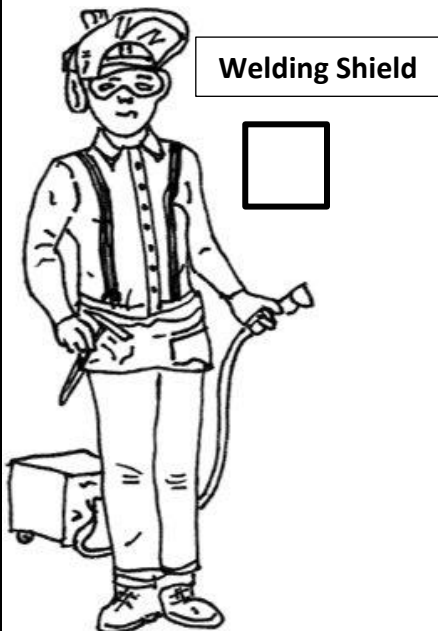
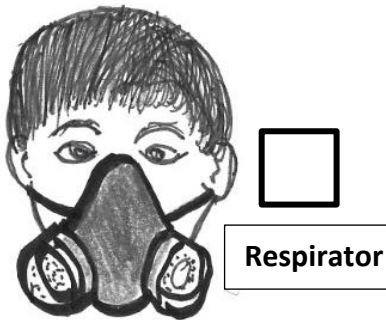
F. This barrier prevents chemicals or pesticides from splashing onto clothing.

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 germs from getting in or out of your nose & mouth.

J. A barrier that protects or covers a farmer's clothing when he sprays pesticides on crops in the fields.



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

Wearing a Barrier:



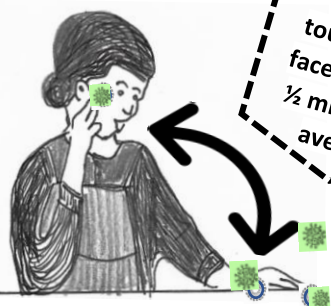
- **Prevents accidentally passing the virus to others** (you may have been exposed and are able to spread the virus but have no signs or symptoms). Your mask lessens the amount of virus that is sent into the air to infect others.

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 reduce 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.

*Remember: a respiratory virus seeks to get into the cells in the nose, mouth, or eyes.

Achoo!

Highest Exposure:
No Masks and not 6 feet apart.

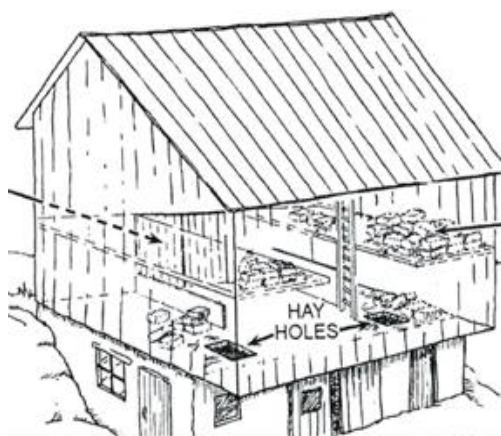
Achoo!

Medium Exposure:
not 6 feet apart & boy's mask is not covering his nose.

***Lowest Exposure:** both wear masks and try to stay 6 feet apart.



Wear a Barrier Continues



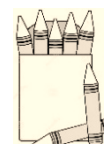
The amount of virus *floating* in the air will be less in:

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



A person is at a high risk of exposure to respiratory viruses:

- If they are Indoors where windows and doors are not open (little ventilation).
- If they are out in public and someone near-by is not wearing a barrier.
- When it is difficult to keep 6 feet from others in public places.
- When a person works for a long time serving customers (some for 8 hours or more) in an environment with little natural ventilation.



How many people in the picture do you see wearing a mask?

Choose one

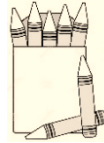
- 1
 _____2
 _____3



❖ Show kindness, when out in public, by wearing a multilayer face covering over your mouth and nose.

When out in public wear a barrier to show:

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



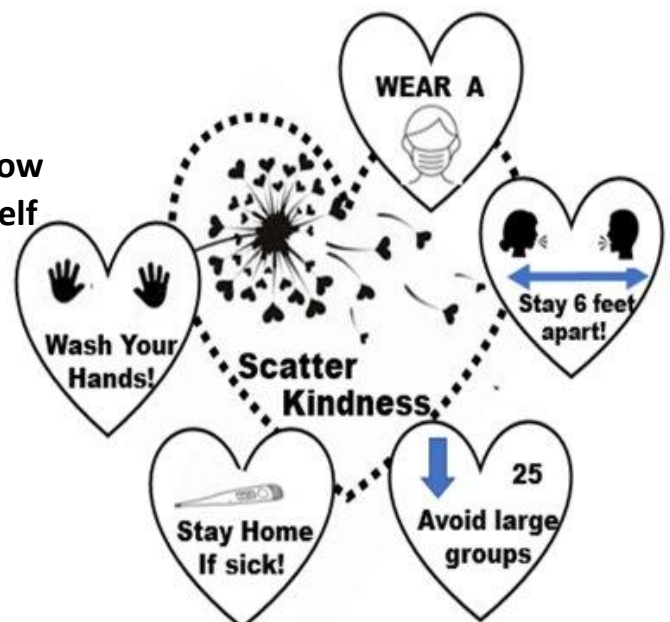
KIND
CARE
FRIEND
RESPECT
SMILE
LISTEN
HELP
LOVE

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



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 spread into the air and stay 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 in 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 and it 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



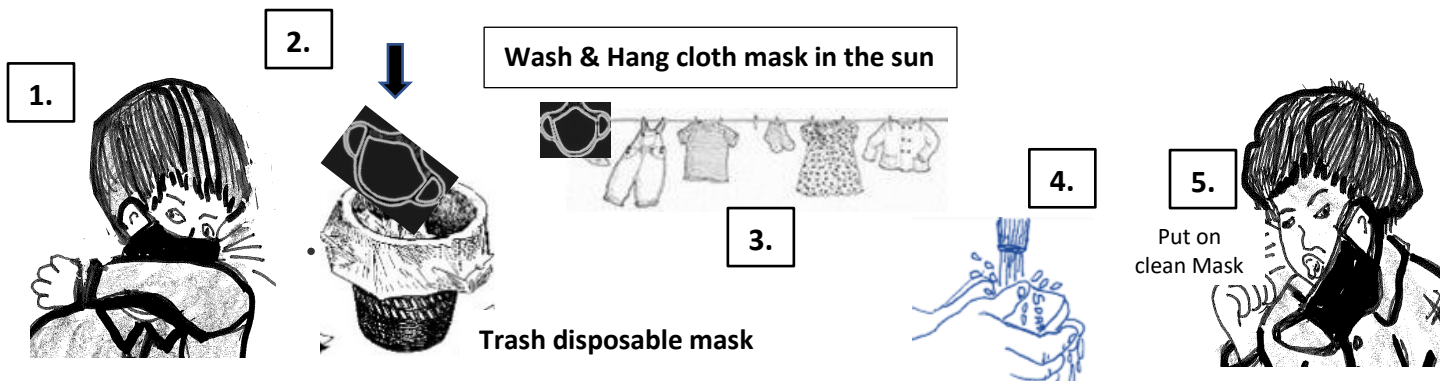
What Should I Do If I Need to Sneeze When Wearing A Mask?

That is a good question, sneezes come quickly.

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

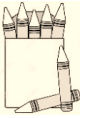
Prevent Spreading Germs By:

1. Cough or sneeze into your mask (in your elbow) or cover your mask with your hands.
2. Throw out a disposable mask.
3. Cotton masks 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.

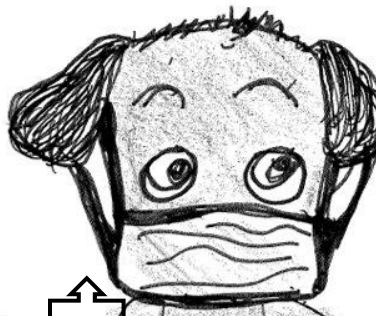


Game: Who Does Not Have a Mask Over Their Nose and Mouth

35



Can you find 3? Then color in each person's



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

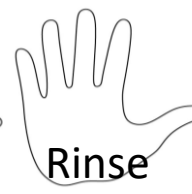
Wash-



Wet



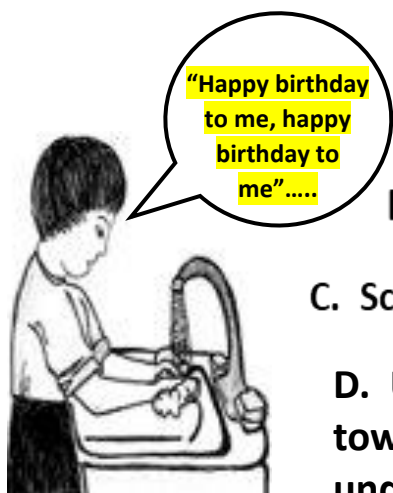
Soap



Rinse



Dry



A. Wet your hands under water.

B. Now use bar soap or liquid soap.

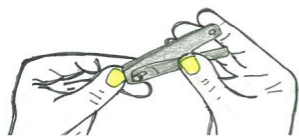
C. Scrub for 20 seconds. Sing "Happy Birthday" 2 times.

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



Nail Brush

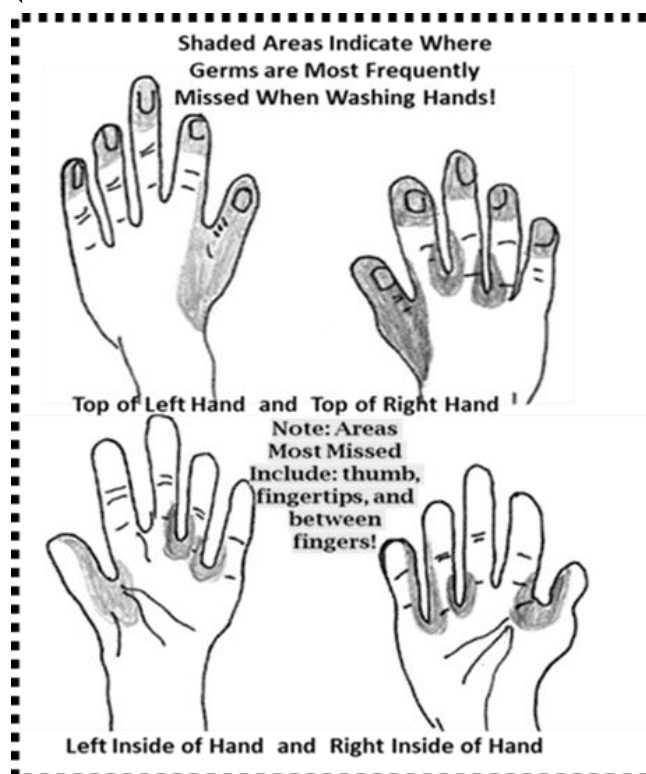
Keep Nails Short!



Make
Hand
Washing
Your
Habit!

Damp hands transfer germs 1000 X's faster.

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



Wash-Often Continued

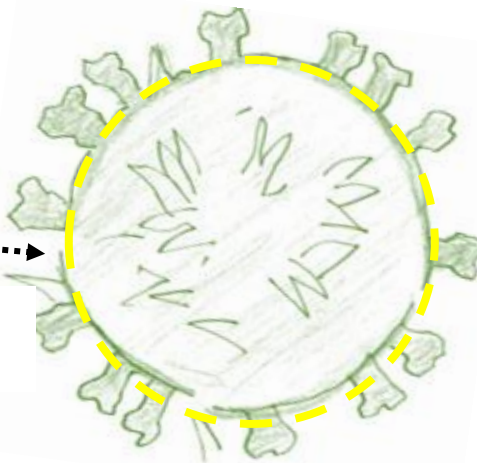
Wash your hands with soap and water for at least 20 seconds if available or use a hand sanitizer that contains 60% or more alcohol. Rub the sanitizer until hands are dry ---- rubbing helps to break down the fat layer around the virus.

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.

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



**Wash!
Don't Spread
Germs!**

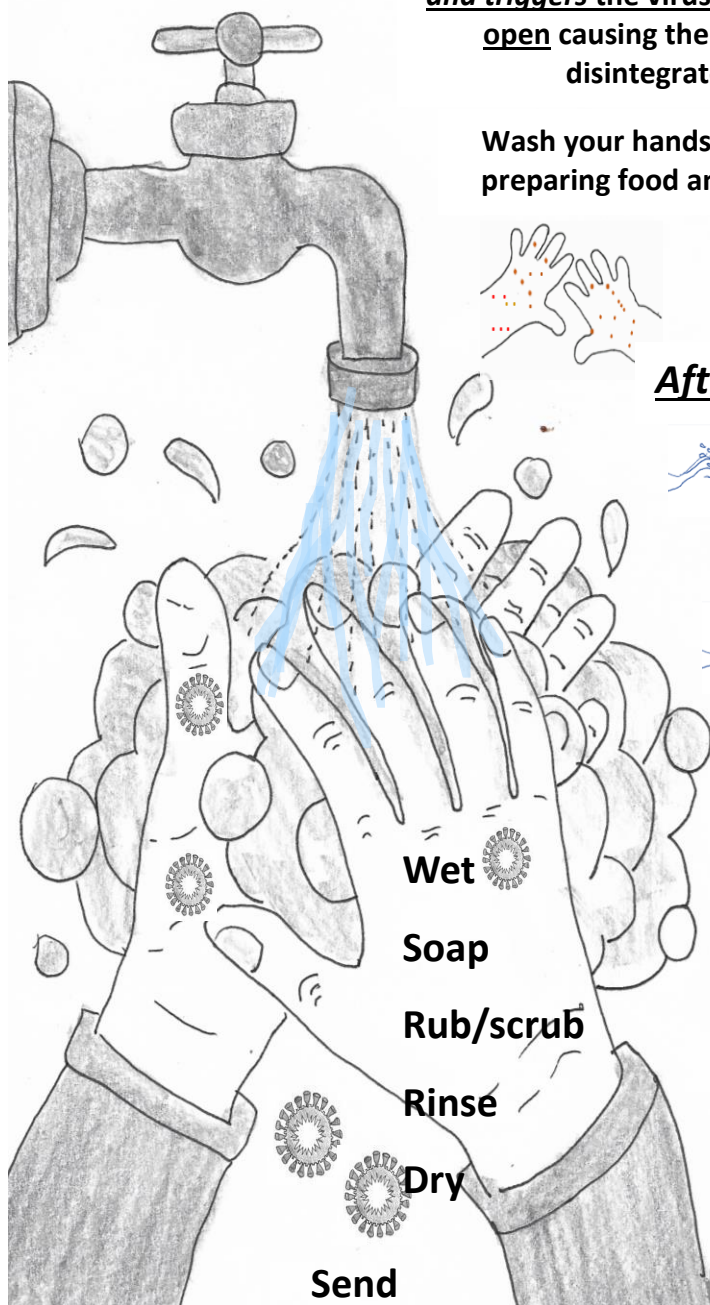
After:

1. Working in the barn.

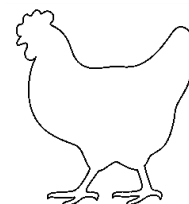
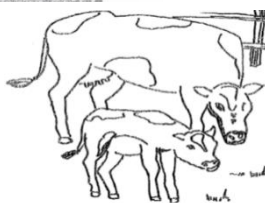
2. Coming home from work or school.

3. Playing or working in garden.

4. Working or caring for animals.



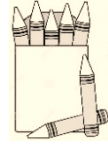
**Send
Germs down the
drain!**



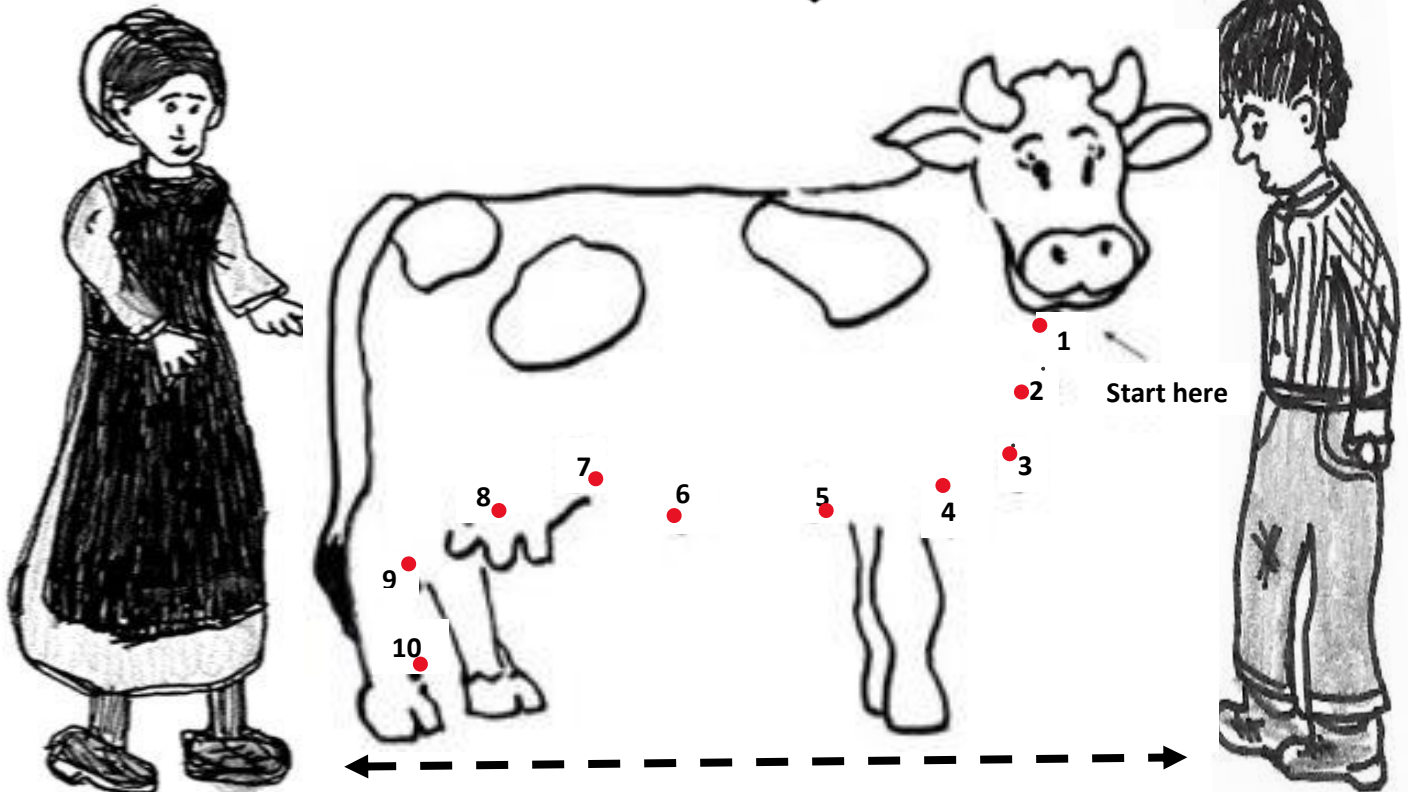
Follow the **4 W's**: **Wear A Mask**, **Wash Often**, **Watch Distance**, **Wait If Sick!**

3

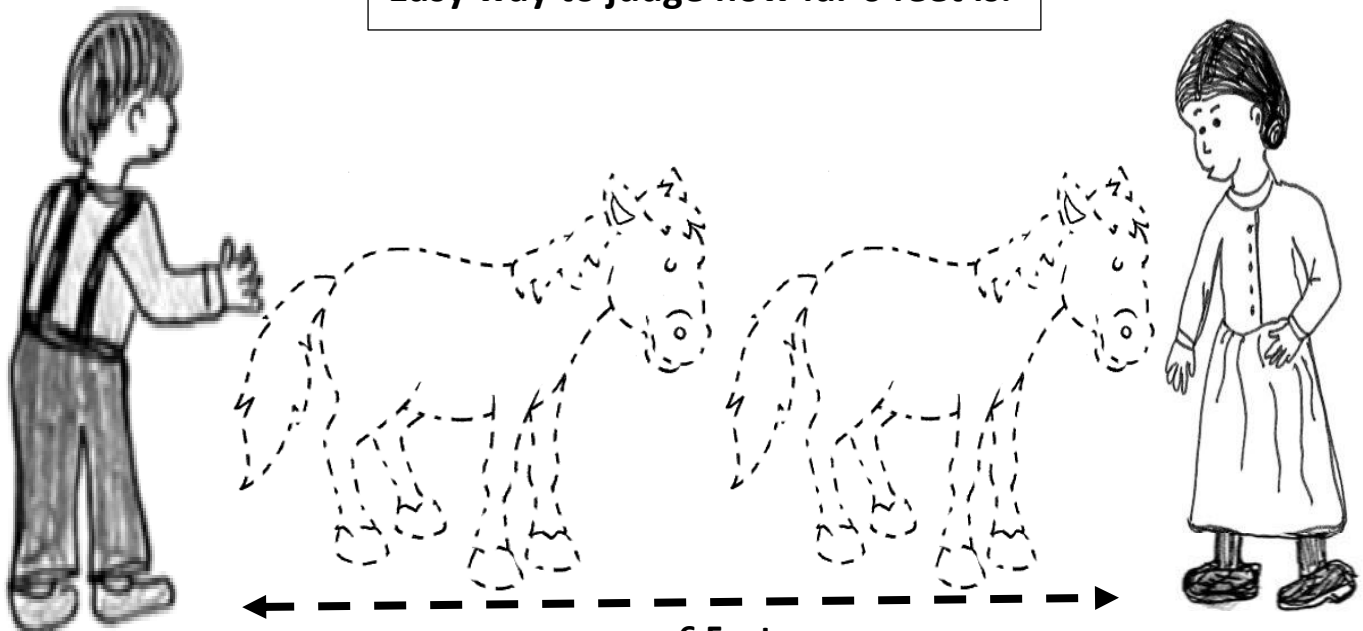
Watch-



Do the DOT-T0-DOT

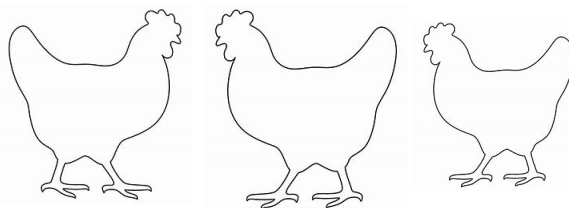


Easy way to judge how far 6 feet is.

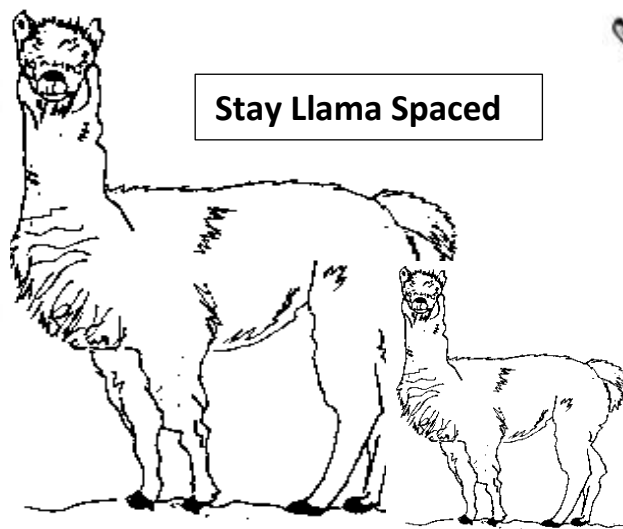


Connect the Dashes

Watch Distance Continued



Stay Llama Spaced



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

Dr. Wright MD



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 someone talks, coughs, or sneezes

Prevent Cold, Flu or COVID-19 Illnesses

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

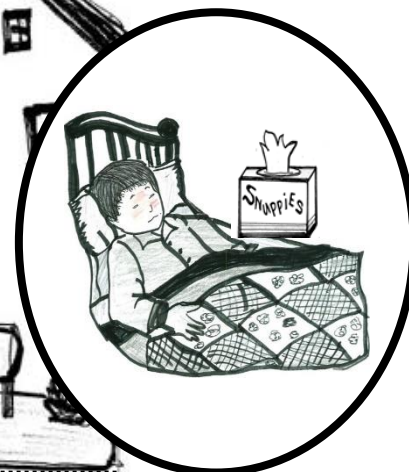
4

Wait-



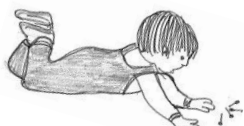
Waiting at Home
Until You feel well
is showing

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 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.



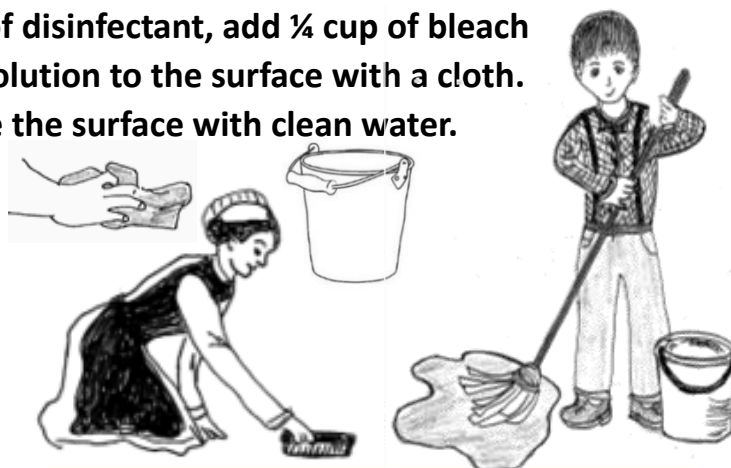
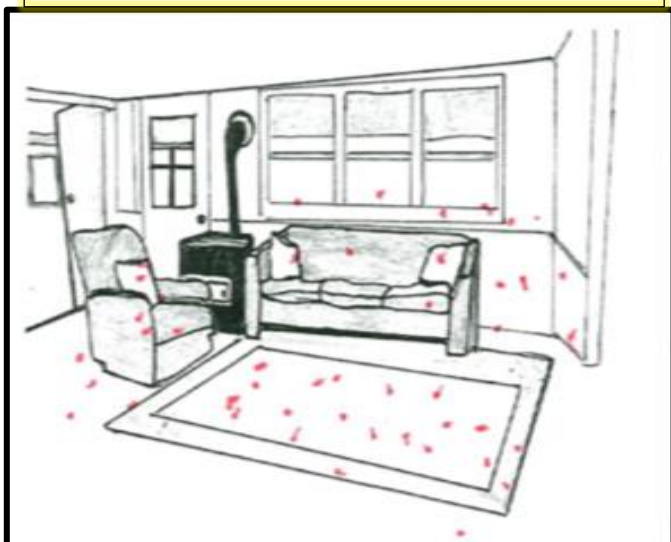
<https://www.cdc.gov/flu/about/disease/spread.htm> www.cdc.gov/.../common-illnesses/colds.html

<https://www.cdc.gov/flu/school/>

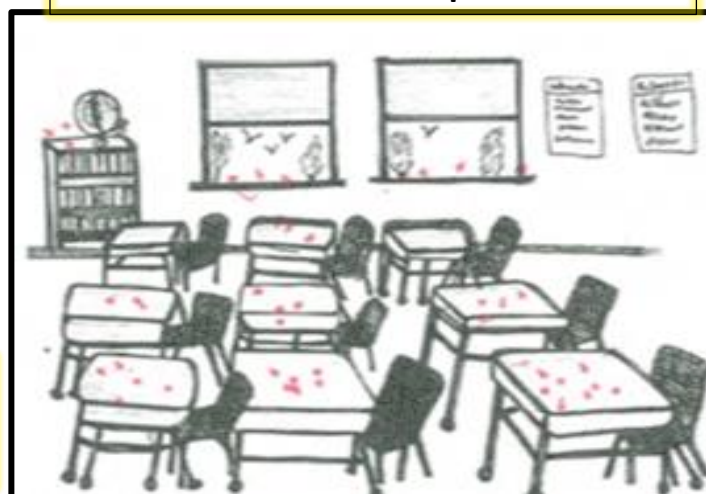
Clean and disinfect hot spots: tables, chairs, floors, windowsills etc.

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 $\frac{1}{4}$ 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.

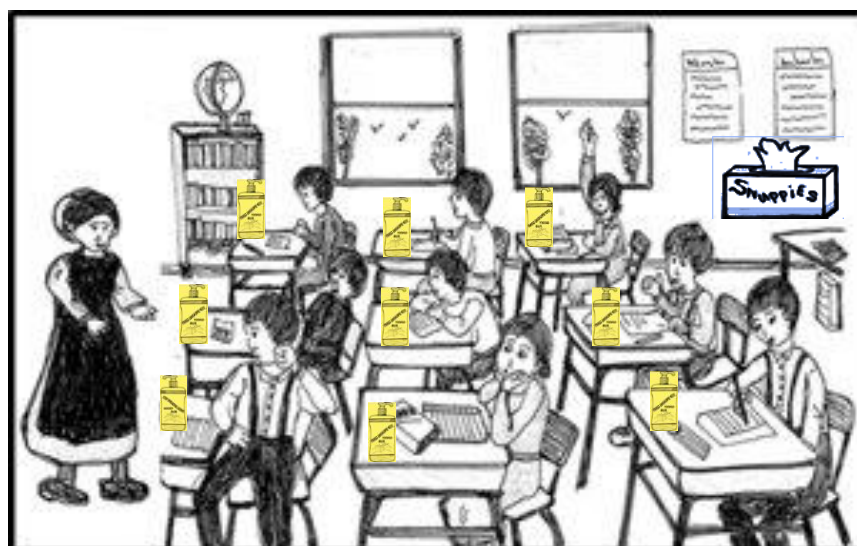
Clean and disinfect hot spots at home.



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



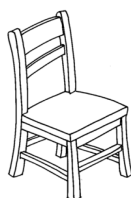
When shopping:



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.

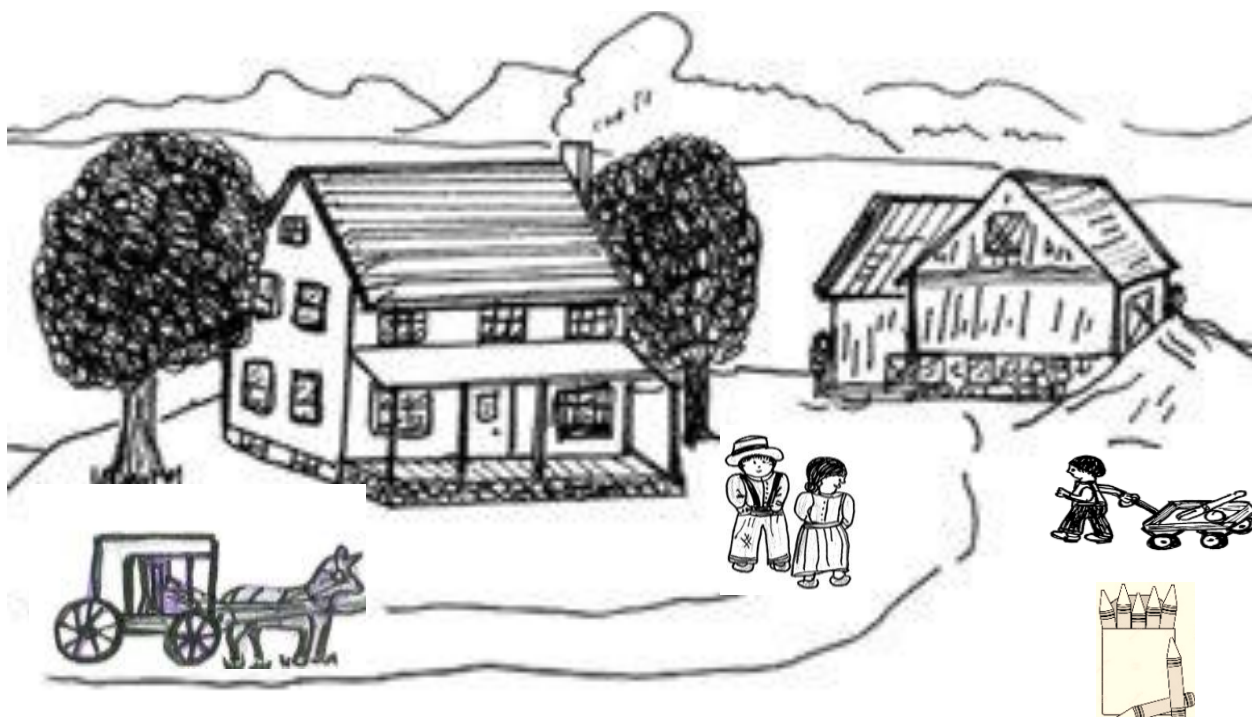
Remember:

- 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.



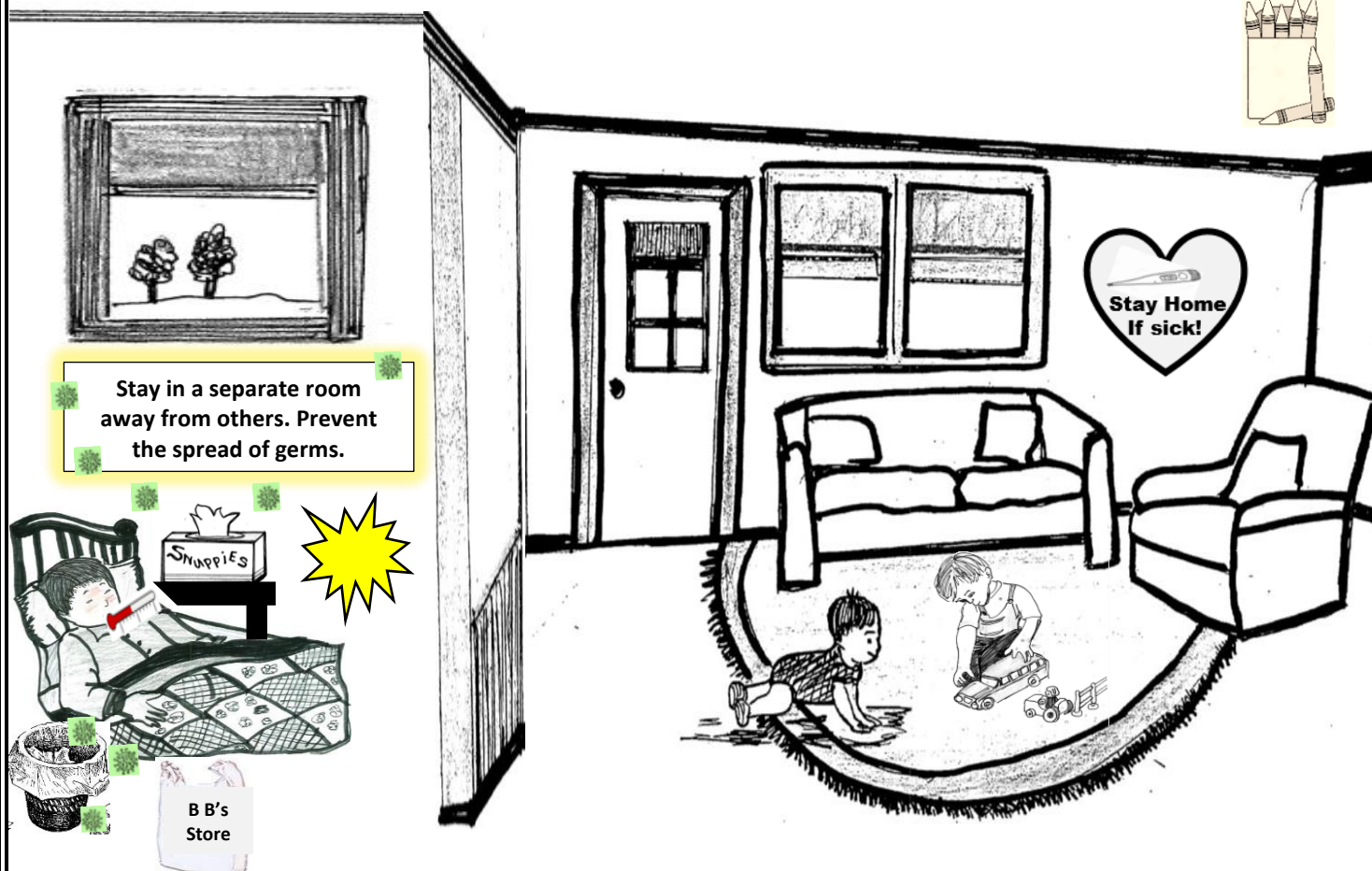
Thinking about going to visit someone:

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



See page 44 for information about how long someone is contagious (could infect others) when sick with a cold, flu, or COVID virus.

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:

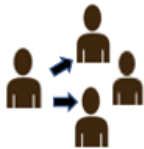





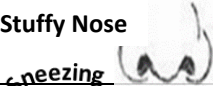




- Call your doctor & get medical advice---some patients are given medication to decrease symptoms early in the illness.
- Get plenty of rest, fluids, over-the-counter medication for fever or aches as your doctor recommends.
- Separate yourself from other people—stay in a specific room away from others. Do not have visitors.
- 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.



<u>Symptoms</u>	<u>Symptoms</u>	<u>Cold</u>	<u>Flu</u>	<u>COVID-19</u> <i>Can be mild to severe</i>
Contagious		1 day before symptoms & up to 5-7 days	1 day before symptoms & is the most contagious for the first 3-5 days	Contagious before symptoms appear & 2 weeks after symptoms disappear
	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

- **Aerosolized 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 & prevent 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.
- **Germ**s-- 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 body's system (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 recognize a previous foreign invader (germ) and alert 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 respiratory (breathing) system.
- **Rhinovirus**- Any of several strains of virus that cause respiratory tract infection (flu, Cold).
- **Seizure**- A sudden attack 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.

Reference Information

When To Call the Doctor



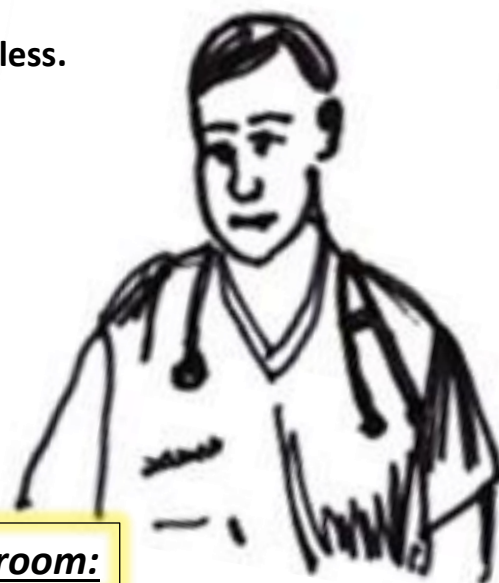
Fever is one of the ways the body fights germs. Germs (bacteria and viruses) are sensitive to heat and can't survive. Some fever is good, but when fever gets too high, a child/adult may seizure.

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/convulsions.
- ❖ 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, labored, and/or fast.
- ❖ "Does not look right" to you and is fussy.

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:

- ❖ 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 with measles, mumps, chickenpox, cold, flu, or COVID.
- ❖ Family members or visitors that are sick.
- ❖ Recent travels.



Tell:
What
When
How
Why

What to Do when A Person is Injured or Severely Sick

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

- Bleeding that cannot be stopped by pressure.
- 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 in a small child.
- A possible poisoning—call Poison Help line (1800-222-1222) or call 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.



Reference
Information

You can copy & put at your phone.



My name is: _____
 My address is: _____
 The Township/Borough I am calling from
 is: _____
 The two roads close to my home/farm
 are: _____ & _____

- What to do in an emergency: Department of Health
 1-PA-HEALTH for
 Rabies etc. 24 hrs./day
- ✓ Call 9-1-1
 - ✓ Stay at the phone
 - ✓ Send someone to meet the responders
 - ✓ Wear a safety vest and swing a flashlight
 - ✓ Provide CPR and/or first aid as needed

POISON
Help
 1-800-222-1222





**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



Penn Medicine
Lancaster General Health

<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>

- **WellSpan Health**---Coronavirus questions

Call for coronavirus related prevention, regarding care information risk, screening, and instructions hotline at 855-851-3641. <https://www.wellspan.org/coronavirus>



PennState Health
Milton S. Hershey Medical Center

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

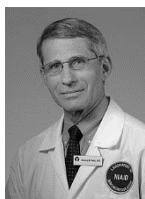
- **Parochial Medical Center**- 1065 W Main St, New Holland, PA 17557--call 717-556-0702

- **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 \(upenn.edu\) www.vaccine.chop](#)

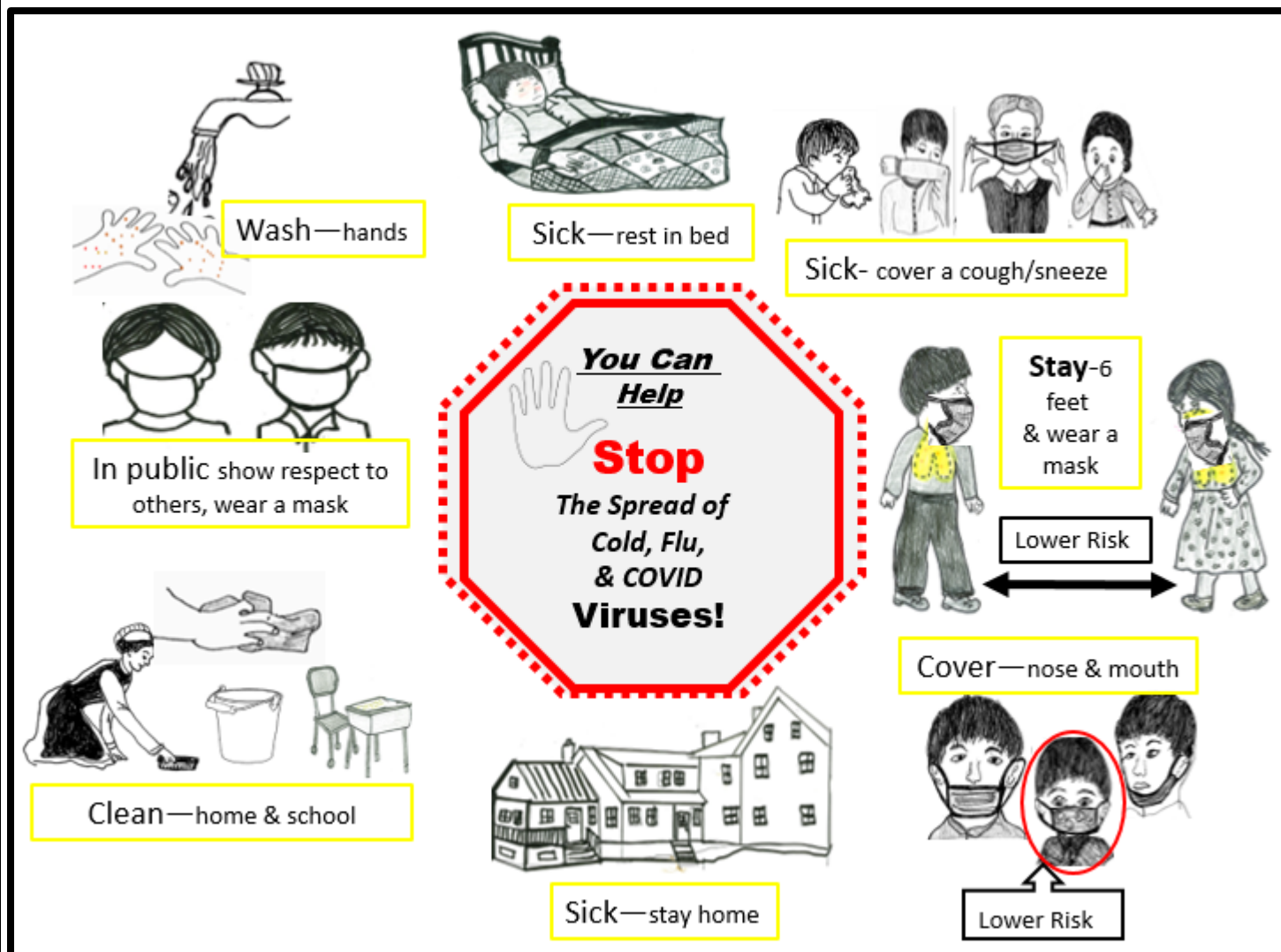


- **Dr. Fauci** is the director of the National Institute of Allergy and Infectious Diseases. He is a physician and has served American public health for more than 50 years. <https://www.biography.com/scientist/anthony-fauci>



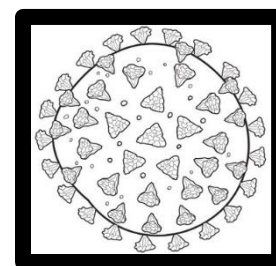
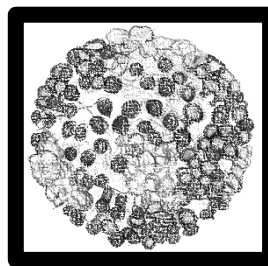
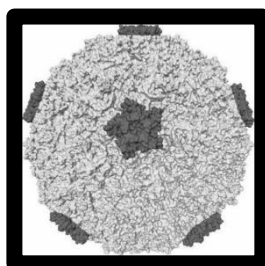
Your Local Physician or Medical Health Center.

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

Wear-

A barrier to:

- Prevent your germs from reaching others.
- Reduce your exposure to a virus and decrease extent of illness.

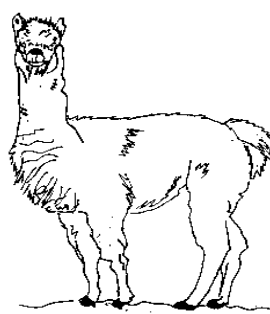
It's not easy to cover or block a sneeze or cough.



Wash-



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



Watch-

Your distance, stay 6 feet apart, gather in small groups, and wear a barrier 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 End of 2019 and is On-going.
- ✓ Is a Pandemic: Spread Worldwide and Affects Many People.
- ✓ Is Spread by Direct Contact: Hands to Face (nose, mouth, eyes).
- ✓ 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, & My Elderly Relatives.
- ✓ Can be Serious if someone has Health Problems/Weakened Immune System.
- ✓ Is Very Contagious: 10 times More Contagious Than the Flu.
- ✓ Can Be Slowed Down by "Me" By Scattering Some Kindness.

