Flu viruses are mainly spread by droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of anyone who is nearby or can be inhaled into the lungs as they float in the air. A person can also be infected by touching a surface or object that has flu virus on it and then touching their own eyes, mouth or nose. Once inside the body the virus begins to multiply, causing the symptoms of flu illness.

People infected with flu shed virus and may be able to infect others for 24 hours before having any flu symptoms and for about 5-7 days after getting sick. This means you can pass the flu virus to someone else before you know you are sick, as well as while you are sick.
ADDITIONAL RESOURCE BOOKS

This HOME CARE GUIDE gives you basic information about how to care for someone who is sick. It’s also a good idea to have first aid and general health care resource books at home. The following books are written by reputable organizations and can help guide you through first aid and other medical care problems at home.

Choose one first aid book:

- **The American Medical Association Handbook of First Aid and Emergency Care**
  (American Medical Association, © 2009)

- **American College of Emergency Physicians First Aid Manual - Second Edition**

Choose one general health care book:

- **The American Medical Association Family Medical Guide - Fourth Edition**
  (American Medical Association, © 2009)

- **The Johns Hopkins Complete Home Guide to Symptoms and Remedies**
  (Authors of the John Hopkins Medical Letter and Simeon Margolis, © 2004)

- **Mayo Clinic Family Health Book - Third Edition**
  (Mayo Clinic, © 2003)

DISEASE TRANSMISSION

**DIRECT CONTACT.** The easiest and most common way to catch most infectious diseases is to come in contact with someone who is sick. Person-to-person contact provides an opportunity for the direct transfer of bacteria, viruses or other pathogens (germs) from one person to another. This can occur when an infected individual touches, shakes hands, coughs on or kisses someone who isn't infected.

**INDIRECT CONTACT.** Many bacteria and viruses can linger on objects such as a tabletop, doorknob, faucet handle, computer keyboard, mouse or phone. You can pick up germs left behind by someone sick with the flu or a cold when you touch any object that a sick person touched before you. Moist mucus membranes of your eyes, nose and mouth provide “easy access” to your body for most germs. If you touch your eyes, mouth or nose before washing your hands ... you can infect yourself.

**DROPLET TRANSMISSION.** If someone coughs or sneezes without covering their mouth and nose, droplets are expelled into the air around them. These droplets contain the germs that cause their illness. They stay suspended in the air, traveling 4-6 feet before they drop to a surface. However, if a droplet from an infected person comes in direct contact with your eyes, nose or mouth, you can become infected. Crowded indoor environments that bring a lot of people together (school, work, malls, houses of worship, etc) promote the chances of droplet transmission.
**IS IT A COLD OR THE FLU?**

Every year, Americans get over one billion colds, and millions more suffer with seasonal flu. Although colds and other viruses may cause similar symptoms, influenza (the flu) weakens a person much more than other viruses and can lead to more serious complications.

The **COMMON COLD** is caused by over 200 different viruses. A cold will develop gradually, and is spread through hand-to-hand contact, sneezes and coughs from someone who has a cold, or by touching a hard surface or object that a person with a cold has recently touched.

The **FLU** is a highly contagious respiratory disease also caused by viruses. Symptoms often appear abruptly, and can be spread by sneezes, coughs and hand contact. Anti-viral drugs taken within the first 24-48 hours of the flu’s onset may reduce the duration of uncomplicated illness.

**Antibiotics cannot treat a virus,** and should not be prescribed unless you develop a secondary bacterial infection. Call your health care provider if you are getting better, and then seem to “relapse” and get sick again.

**PNEUMONIA** is an infection or inflammation of lung tissue. It can appear suddenly or develop as a complication of a bad cold, the flu or bronchitis. It is a serious disease, and is especially dangerous for people over age 65 or anyone with a chronic condition. Pneumonia can be life threatening and must be treated by a doctor. Early diagnosis and treatment are essential to recovery. Bacterial pneumonia can be treated with antibiotics. Viral pneumonia is treated primarily with rest.

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<table>
<thead>
<tr>
<th><strong>SYMPTOMS OF THE FLU</strong></th>
<th><strong>THE FLU</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever **</td>
<td>Sudden, often high (102° - 104°F)</td>
</tr>
<tr>
<td>Headache **</td>
<td>Sudden - can be severe</td>
</tr>
<tr>
<td>Muscle (body) aches and pains **</td>
<td>Common - often severe</td>
</tr>
<tr>
<td>Fatigue and weakness **</td>
<td>Sudden - can last 2-3 weeks</td>
</tr>
<tr>
<td>Extreme exhaustion **</td>
<td>Early and prominent</td>
</tr>
<tr>
<td>Chest discomfort and cough</td>
<td>Common - can be severe</td>
</tr>
<tr>
<td>Sore throat, sneezing &amp; stuffy nose</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Diarrhea and vomiting</td>
<td>Common in children</td>
</tr>
</tbody>
</table>

**These symptoms are rare or mild with a common cold. Sore throat, sneezing and a stuffy nose are the more common symptoms of a cold.**

Cold symptoms usually develop gradually. Onset of flu symptoms is often sudden and severe.
INFECTION CONTROL STRATEGIES

Droplets containing cold or flu virus from a cough or sneeze can stay in the air for 4-6 feet. Those same droplets can contaminate everything in their path before they fall to a surface. This means viruses are everywhere!

Flu viruses can survive on hard surfaces for up to 2 days, and on cloth and tissues for 8-12 hours. If you touch a contaminated surface or object and then touch your own eyes, nose or mouth you can infect yourself ... even if the surface or object looks clean.

Since an individual is infectious (can spread a cold or the flu) for 24 hours before symptoms appear, it is important to practice basic infection control strategies in your everyday life:

- Consistent hand hygiene (wash your hands)
- Cover your cough and sneeze
- Disinfect contact surfaces
- Take personal responsibility for your behavior (stay home when you’re sick)

Watch for the first signs of illness in a family member - the sooner you start caring for and isolating the sick person, the easier it is to control the spread of disease in your own home. Patients are most infectious during the 24 hours before - and for 3-5 days after - the onset of illness.

It is important that individuals stay home and NOT immediately return to work or school when they start to feel better. The sick person’s body is in a weakened state and is more susceptible to secondary infections. Stay home and rest for at least 4-5 days after recovering from the flu.

WASH YOUR HANDS

Hands are an efficient “bridge” between germs in the environment and your body. WASH YOUR HANDS!

- Use soap and warm water. The lather (bubbles) help lift germs off the skin.
- Rub your hands vigorously. The friction also helps loosen germs from the skin.
- Completely wash all surfaces of your hands and wrists, between fingers, the knuckles, under the fingernails and the backs of hands for 20 seconds.
- Rinse off all soap completely. Leave the water running.
- Dry your hands with a paper towel. Never use a cloth towel in a public restroom.
- Use the paper towel to turn off the faucet. If you touch the faucet with your clean hands, you re-contaminate yourself.
- Use the paper towel to open the bathroom door. Remember, many people don’t wash their hands after using the bathroom and then touch that doorknob!

SANITIZE your hands with alcohol-based gel, foam or towelettes. These products don’t need water to work, reduce the number of microorganisms (germs) on skin, are fast acting and usually cause little skin irritation.

Apply the product to the palm of one hand and rub your hands together for at least 15 seconds. Cover all surfaces of your hands and fingers until entire hands are dry. While alcohol does kill germs, alcohol-based products do not remove dirt. Wash “dirty” hands” with soap and water as soon as possible.
DON'T SPREAD THOSE GERMS!

- Sneeze and cough into your sleeve or the crook of your arm to avoid contaminating your hands.
- If you use a tissue to cover your mouth and nose when you cough or sneeze, drop your used tissue in a waste basket. Never reuse a tissue.
- Turn your head away from people whenever you cough or sneeze.
- If you use your hand to cover a cough or sneeze, make sure to wash your hands or use an alcohol-based sanitizer immediately to avoid spreading your germs to objects or people you touch.

KEEP YOUR HANDS AWAY FROM YOUR FACE!

It's a fact: even with good hand washing habits, our hands carry many germs and we can easily infect ourselves by touching the "T" zone of our face - the eyes, nose, and mouth.

Begin to notice how often you rub the corner of your eyes, use your finger to remove a little "sleep" from your eye, do a quick wipe underneath your nose, scratch an itch inside your nose (when no one is looking), bite a fingernail or chew a cuticle.

Change your habits now, before you get sick!

SOCIAL DISTANCING means keeping sick and healthy people apart. You can reduce your risk of illness by using social distancing at home, work or in a group of any kind:

- Keep 4-6 feet away from people, especially if they are coughing or sneezing.
- Turn your head away from a person who coughs or sneezes in close quarters.
- Walk away if you are standing in line (at the bank, in the supermarket or pharmacy) if the service provider or another patron is coughing or sneezing.

STAY HOME IF YOU’RE SICK!

Health officials recommend that if you get sick, stay home and away from others as much as possible. Do not go to work sick and do not send sick children to school or day care.

- Isolate the sick person within your home. This means choosing a room (or area if you do not have a separate room) in your home where the sick person can stay for the entire time they are sick.
- Ideally only one individual should care for the sick person. This will minimize other family members’ exposure to their illness.
- It’s best if those who are not sick use a separate bathroom. If this isn’t possible, stock the bathroom with paper towels, hand soap dispenser, hand sanitizer and a disinfectant.
ABOUT FEVER

Fever stimulates the body’s immune system as a normal response to an infection. In most cases, fever is not serious and is an indicator that the person’s body is at work fighting off an illness.

A temporary rise in temperature (100.4°F to 101.3°F) can be caused by exercise, excessive clothing, a hot bath or even hot weather. The normal range for fever due to illness is between 101°F and 104°F, and even higher (up to 105°F) in children.

TAKING A TEMPERATURE

Getting an accurate temperature can take some practice.

- Rectal temperature is the most accurate kind of temperature you can take. Oral (by mouth) temperature is also accurate if it is done properly. For a child younger than 5 years old, a rectal temperature is best. For anyone older than 5 years old, it’s usually best to take an oral temperature.

- Do not use a rectal thermometer orally, or an oral thermometer rectally - they are not interchangeable.

- Taking a temperature at the armpit is the least accurate. Temperatures taken with an ear thermometer are also not reliable.

- Replace older glass mercury thermometers with a digital thermometer. Dispose of old mercury thermometers safely: contact the Mercer County Improvement Authority at (609) 278-8100 or www.mcia-nj.com for information about Hazardous Chemical Collection Events.

TREATING A FEVER

Encourage the sick person to DRINK LOTS OF LIQUIDS to replace the body fluids lost due to sweating from a fever.

REMOVE EXTRA CLOTHING. Do not bundle up a person with a fever as it may cause the fever to increase. Clothing should be kept to a minimum to allow heat loss through the skin. If the sick adult or child feels cold or is shivering (the chills), give them a light blanket.

USE FEVER REDUCING MEDICINES such as acetaminophen (Tylenol) or ibuprofen (Advil) to reduce fever. Fever reducing medicines should lower the fever 2-3°F within two hours after taking an age (or weight) appropriate dose.

DO NOT give aspirin to any child under 21 years of age, as it can cause Reyes syndrome, a very serious illness.

Do not mix or combine different acetaminophen and ibuprofen-containing medicines. This will not help reduce the fever and it can cause accidental overdose poisoning. READ THE LABEL on all OTC medications to make sure that they don’t have the same ingredients.

A SPONGE BATH in lukewarm water can help a sick person feel better, but it does not reduce a fever. It is important to first give the sick adult or child a fever reducing medicine. Wait at least 30 minutes to give a sponge bath so the medicine has a chance to start working. Fill the tub with about 2 inches of lukewarm water (85°F - 90°F) and wet the skin with a sponge. Do not add ice, ice water or rubbing alcohol to the water - these things do not help reduce fevers.
DEHYDRATION

Dehydration happens when the body loses too much fluid and the fluid is not replaced quickly enough. Body fluids are lost during illness because of sweating and fast breathing from fever, vomiting and diarrhea. It’s important that anyone who is sick drink lots of liquids to help them fight off and recover from any illness.

Offer liquids to sick adults and children throughout the day. Anyone who is sick may not feel thirsty or want to drink liquids, but it is important to continue to offer them small amounts of liquids frequently.

Water is always a good choice. If the sick adult or child is not vomiting, you can offer diluted fruit juice, herbal tea, broth, popsicles or jello.

If the sick adult or child has mild diarrhea or is vomiting, give them liquids with electrolytes (to replace the loss of salt and sugar in the body) such as sports drinks like Gatorade. Check with your health care provider for toddlers or babies, who may need a special rehydration solution like Pedialyte.

If the sick adult or child has not urinated in more than 12 hours (6 hours for infants) and has symptoms such as dry mouth, dry eyes or little or no tears and has an overall sick appearance, it is important to call for medical advice.

Watch for an increase in urination, a lighter color of urine and overall improvement of symptoms. These are signs that the liquids are working.

WHEN TO CALL THE DOCTOR

Do not rush to the hospital or your doctor’s office for basic care. Contact your health care provider immediately in the following situations:

CHILDREN:

- Fever above 103°F, or a fever that lasts more than 3 days
- Symptoms that last for more than 10 days
- Trouble breathing, fast breathing or wheezing
- Bluish skin color
- Earache or drainage from the ear
- Changes in mental state (such as not waking up, irritability or seizures)
- Flu-like symptoms that improve, but return with a fever and a worse cough
- Worsening of a chronic medical condition such as asthma, diabetes or heart disease
- Vomiting or abdominal pain

ADULTS:

- A prolonged fever above 102°F with fatigue and body aches
- Symptoms that last for more than 10 days or get worse instead of better
- Trouble breathing or shortness of breath
- Pain or pressure in the chest
- Fainting or feeling like you are about to faint
- Confusion or disorientation
- Severe or persistent vomiting
- Severe sinus pain in your face or forehead
- Very swollen glands in the neck or jaw
USE ANTIBIOTICS WISELY

Antibiotics only work against infections caused by bacteria. Don't expect antibiotics to cure any illness caused by a virus.

Antibiotics don't work against any viral infections, which cause most sore throats, colds and the flu, as well as coughs (bronchitis) and many middle ear and sinus infections.

Each time we take antibiotics sensitive bacteria are killed, but a few resistant ones are left to grow and multiply, passing their resistance to future generations of the mutated bacteria. These bacteria have learned ways to become immune to the effect of antibiotics, becoming antibiotic or antimicrobial resistant.

Take all medicine as prescribed. ALWAYS complete the full course of antibiotics, even if you are feeling better before the medicine is finished. Never save some of the medicine to treat yourself or others later.

Antibiotics may alter the effectiveness of other medications, cause side effects and/or allergic reactions. Tell your doctor if you are taking any other medication, drink alcohol, have any known allergies or are pregnant.

Talk to your health care provider for advice on what to do to ease your symptoms while your body fights off the virus.

If your doctor says you do not have a bacterial infection, do not demand an antibiotic. However, let her know if the illness gets worse or seems to get better and then returns, so she can reevaluate the illness and provide proper treatment.

NON-PRESCRIPTION (OTC) MEDICINE

Many of us seek relief with OTC medications before we visit our health care provider. It's important to know which type of medicine will help your specific symptom. Choose a medication that only relieves your symptoms. Avoid “combos” like Theraflu or Tylenol Cold**, which often include ingredients you really don’t need.

- **ANALGESICS** [aspirin, acetaminophen (Tylenol), ibuprofen (Motrin or Advil), sodium naproxen (Aleve)] relieve muscle aches and pains, and reduce fever.

- **ANTIHISTAMINES** [diphenhydramine (Benadryl), cetirizine (Zyrtec), loratadine (Claritin)] relieve runny nose, sneezing, itching of the nose and throat, and watery eyes due to allergies. However, they have the opposite effect on cold symptoms, further drying nasal membranes and slowing the flow of mucus.

- **DECONGESTANTS** [pseudoephedrine, phenylephrine (Sudafed)] shrink the nasal passages and reduce congestion.

- **EXPECTORANTS** [guaifenesin (Mucinex)] work by thinning mucus so that it be can more easily coughed up.

- **ANTITUSSIVES** [dextromethorphan (Robitussin)] are cough suppressants that work by quieting a cough. They are usually recommended for dry (nonproductive) coughs where you are not producing mucus.

** All chemical and brand names are included as examples of common OTC medications, and are not endorsements by the Health Department for use. Talk with your pharmacist or health care provider for advice.
CLEANING SURFACES

Flu viruses can live on a hard surface for up to 2 days! Though not as hardy as flu viruses, cold viruses can also make you sick long after the infectious person has contaminated a surface.

Clean surfaces and shared objects with a household product labeled as a disinfectant or with a chlorine bleach solution daily. This includes counters and table or desk tops, doorknobs and handles, light switches and stair rails. Wipe down microwave doors, phones, remote controls, the keyboard and mouse, toilet seats and handles, faucets and toys frequently.

Disinfectants should be registered with the EPA. Look for the EPA registration number on the label: it should clearly state that the product is “EPA approved” for killing bacteria and viruses. Only use according to the manufacturer's directions.

If you do not have a store bought disinfectant, you can make your own solution - mix 1/4 cup of household bleach in 1 gallon of water. A new batch of disinfectant solution must be mixed each day. Don’t be misled by the “bleach” smell: the solution loses its effectiveness to destroy disease-causing pathogens 24 hours after it is made.

DO NOT mix bleach with any ammonia-containing cleaning product. The combination of chlorine in the bleach and ammonia releases a toxic gas. This gas breaks down to hydrochloric acid when it contacts the moisture in the mucus membranes of the nose and lungs.

Environmental cleaners and disinfectants should never be used to treat skin wounds or infections.

INCREASE the frequency of cleaning and disinfecting of:

- Bathrooms - clean surfaces that people touch such as sink faucets, toilet flush handles and door knobs.
- Tables and counter tops where people eat or prepare food.
- Rooms or areas that are used to isolate sick family members.
- Soiled linens and clothes with warm water and laundry detergent. If possible, dry them in a hot air dryer.

AND ... remember:

- Get fresh air into the room to reduce the amount of germs in the room. Whenever possible, open windows to bring in fresh air. This should be done a few times a day for 10 to 15 minutes each time in all rooms of the house, but especially in the room where the sick person is placed.
- Everyone’s dishes can be washed together by hand with warm water and dish soap, or in a standard dishwasher. It is not necessary to separate dishes and eating utensils between sick and healthy persons as long as they are thoroughly washed.
- Everyone’s clothes can be washed together with detergent and warm water, but handle dirty laundry carefully so that you do not spread the virus to other parts of your house. Do not “hug” the laundry to yourself when picking up or moving dirty laundry. Spray the laundry basket with a disinfectant before putting clean laundry back in the basket. Make sure to wash your hands after handling dirty laundry.
KEEP YOUR IMMUNE SYSTEM STRONG!

Everyone's immune system is different. Some people never seem to get infections, while others seem to be sick all the time. While some people are fortunate to have a naturally strong immune system, there are things you can do to help strengthen your immune system:

1. **EAT FOODS TO BOOST YOUR IMMUNE SYSTEM** that are rich in antioxidants like vitamins C and E, carotenoids (building blocks of vitamin A), and omega-3 fatty acids. Choose deeply colored produce like peppers, broccoli, carrots, leafy green veggies, tomatoes, and citrus fruits; nuts, fatty fish like tuna, salmon or sardines; and whole grains.

2. **STAY HYDRATED.** Not only does it help flush toxins from the body, but staying well hydrated keeps the mucus membranes in the nose and respiratory system moist and more resistant to germs, and helps thin excess mucus if you do get sick. Thirst is not an indicator of dehydration. Drink lots of fluids: water, juice, milk, or soup - fruits and vegetables count too!

3. **EXERCISE.** Regular moderate exercise, like brisk walking, can boost the immune system’s antibody and T cell responses. Make sure everyone in the family gets at least 30 minutes of moderate exercise on most days of the week. Can’t find 30 minutes? Ten minutes of activity at a time is fine as long as those 10 minute sessions add up to a total of 30 minutes by the end of the day.

4. **GET ENOUGH REST.** Chronic lack of sleep affects your whole body, including the immune system. Children need 9-11 hours, adolescents need about 9 hours, and adults need 7-9 hours of sleep a night. Full schedules make it easy to be sleep deprived, so establish a healthy bedtime for everyone in the family.

5. **CONTROL STRESS.** While some situations are a real crisis, it’s the day-to-day events that are often the most overwhelming and stressful. Everyone has daily stress ... the key is how you deal with it!
   - Set limits and priorities.
   - Be willing to delegate tasks when others offer their help.
   - Create a support system.
   - Laugh!

6. **WASH YOUR HANDS** after coughing, sneezing or blowing your nose, using the bathroom, touching pets, playing outdoors, when caring for someone who’s sick, and before preparing or eating food. Use plenty of soap and water, and remember to lather up for a full 20 seconds. You can also use an alcohol-based hand sanitizer.

7. **KEEP IMMUNIZATIONS UP-TO-DATE.** Vaccines help your immune system identify a disease’s presence - and destroy it - before it has a chance to multiply inside your body and cause illness. Check with your health care provider about an annual flu shot, and whether anyone (children and adults) in your family is due for a “booster” shot for other vaccinations. Ask about the pneumonia vaccine.
**IS THIS YOUR DESK?**
(Statistics based on a study by Dr. Charles Gerba, U. of Arizona, 2001)

- There are over 10 million germs in the area where you rest your hand on your desktop.
- Telephones are the worst, followed by desktops, water fountain handles, microwave door handles, keyboards and computer mice.
- An average desktop has 400 times more bacteria on it than the average toilet seat.

How do germs get there? **YOUR HANDS!** Most germs spread hand-to-surface, so it’s almost impossible not to contaminate your work surface, even if you wash your hands regularly.

**WHAT YOU CAN DO**

- Clean the surface of your desk, phone, keyboard and mouse with a disinfectant regularly - especially after someone else uses them.
- Disinfecting wipes or sprays made for cleaning office surfaces are not meant for cleaning your hands. Keep a sanitizer at your desk that is safe for use on your skin.
- Sanitize your cell phone! Think about it ... you hold it against your face, breathe on it, touch it with your dirty hands, and then keep it nice and warm in your pocket.

**NEED TO FIND HELP?**
Call 211 ▪ www.nj211.org

**ADDITIONAL RESOURCES**

Centers for Disease Control
(800) 232-4636 ▪ www.cdc.gov

Emergency Preparedness
FEMA ▪ www.ready.gov
American Red Cross
(609) 951-8550 ▪ www.redcross.org

FamilyCare (health insurance)
(800) 701-0710 ▪ www.njfamilycare.org

NJ Self Help Group Clearinghouse
(800) 367-6274 ▪ www.njgroups.org

NJ Department of Health
(800) 367-6543 ▪ www.state.nj.us/health

Partnership for Prescription Assistance
(888) 793-6765 ▪ www.rx4nj.org

Poison Control Center
(800) 222-1222 ▪ www.njpies.org

Senior Citizens Services (NJ EASE)
(877) 222-3737 ▪ www.state.nj.us/health/senior/sanjease

West Windsor Health Department
(609) 936-8400 ▪ www.westwindsornj.org